

1963
CENSUS OF MINERAL INDUSTRIES

VOLUME I
PRELIMINARY REPORTS

SUMMARY STATISTICS
AND
MAJOR GROUPS 10-14

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1963 CENSUS OF MINERAL INDUSTRIES

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-1

SUMMARY SERIES

preliminary
report

General Statistics for Industry Groups and Industries

This report presents preliminary results from the 1963 Census of Mineral Industries for mining in the United States as a whole. Figures are shown for most of the 50 Standard Industrial Classification (SIC) mining industries and for some subindustries as well as for industry groups and the 5 major groups within mining.

The figures shown in this report represent industry totals for 1963 and 1958 general statistics, usually as published in the preliminary industry reports for the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries. No adjustments in the dollar figures have been made for changes in price or wage levels between the two census years, 1958 and 1963.

The value of shipments and receipts of all mineral industries in 1963 amounted to \$21.7 billion, an increase of about 20 percent from 1958, according to preliminary results obtained from the 1963 minerals census. This total included \$14.6 billion for the Oil and Gas Extraction Industries, an increase of 25 percent from 1958; \$2.6 billion for the Coal Mining Industries, a decrease of 5 percent from 1958; \$2.3 billion for the Nonmetallic Minerals (Except Fuels) Mining Industries, an increase of 25 percent from 1958; and \$2.1 billion for the Metal Mining Industries, an increase of about 16 percent from 1958. Average employment in the mineral industries showed a decline of 16 percent from 1958 to a total of 614 thousand employees in 1963. Average employment in the major groups of mineral industries in 1963 was: for the Oil and Gas Extraction Industries, 269 thousand, a decrease of 14 percent from 1958; for Coal Mining, 146 thousand, a decrease of 31 percent from 1958; for Nonmetallic Minerals Mining, 122 thousand, an increase of 3 percent from 1958; and for Metal Mining, 78 thousand, a decrease of 15 percent.

September 1965

Value added in mining in 1963 amounted to \$15.8 billion, an increase of about 18 percent from 1958, amounting for the four major groups of industries in the order specified above to: \$10.9 billion, an increase of 21 percent from 1958; \$1.7 billion, a decrease of 2 percent; \$1.7 billion, an increase of 25 percent; and \$1.4 billion, an increase of about 20 percent, respectively.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

INDUSTRY CLASSIFICATION

In the census of mineral industries, figures are collected from each establishment primarily engaged in the extraction of minerals occurring naturally. This census includes establishments primarily engaged in exploration and development of mineral properties and contract service establishments primarily engaged in work for others on mineral properties. In general, crushing, screening, washing, concentrating, and other preparation operations needed to render the material marketable are included, whether or not the preparation plants are located at the mines served. Smelting of metallic ores, petroleum refining, and production of cement, clay products, and concrete products are excluded and classified in the manufacturing industries.

Mining operations not within the scope of the minerals census are secondary activities at manufacturing or other nonmanufacturing establishments,

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



such as stone quarries at cement, lime, and dimension stone dressing plants; sand and gravel mines at ready-mixed concrete and concrete products plants; clay pits at structural clay products plants and pottery plants; and gypsum mines at gypsum products plants. The approximate values of such excluded mineral production in 1963 and 1958 were \$394 million and \$362 million, respectively, all of which represents mineral products for which the primary production is classified in Major Group 14—Nonmetallic Minerals (Except Fuels) Mining.

Each establishment is classified in a particular industry according to the SIC system on the basis of the value of its principal products. The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) are reported for each establishment as a whole. Therefore, the aggregates for each industry reflect not only the primary production statistics of the establishments classified in that industry but also their production of secondary products and receipts for other activities (principally contract work performed for others). The extent to which establishments classified in an industry specialize in producing products regarded as primary to that industry is shown in reports in the industry series.

The SIC system combines the 50 individual mining industries into 20 industry groups which are, in turn, combined into 5 major industry groups. Each individual industry is designated by a 4-digit code, each industry group by a 3-digit code identical with the first three digits of its component industries, and each major industry group by a 2-digit code identical with the first two digits of its component industry groups.

All reports of the 1963 census are based upon the 1957 edition of the Standard Industrial Classification Manual published by the Bureau of the Budget, as amended by the "Supplement to the 1957 Edition" (1958).

ESTABLISHMENT STATISTICS

In the minerals census, data are obtained for the operations of an entire establishment showing output in terms of quantity and value; operating and development costs; and labor, materials, supplies, and equipment requirements. Mining operations are classified by industry on the basis of the value of the principal mineral produced, or, if there was no production, on the basis of the principal mineral for which exploration or development was in process. For most mineral industries, secondary mineral products are of little statistical importance. The most significant exceptions are for establishments producing complex ores containing copper, lead, zinc, gold, and silver and for wells which produce both oil and gas. A mineral establishment is generally defined as a single physical location where mineral operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. For oil and gas field operations, only one report was required for all oil and gas field operations of a company for

each State, except that district reports were obtained for Louisiana, Texas, and New Mexico. For mineral services, which frequently operate over a wide geographic area, only one report was usually required for all such operations in the United States.

A separate report is obtained for each establishment with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Firms operating more than one establishment are required to submit a separate report for each separate location. Also, companies engaged in distinctly different lines of activity at one location submit separate reports if the company records permit such a separation and if the company activities are substantial in size.

CENTRAL ADMINISTRATIVE OFFICES AND AUXILIARY UNITS

Respondents were asked to file separate reports for any central administrative offices or auxiliary units which were: (1) at different locations from the establishments served or, (2) at the same location as one of these establishments, but were not operated as an integral part thereof and served two or more establishments. The functions of employees in central administrative offices include: general company policy determination, planning and management (i.e., company purchasing, accounting, general engineering, direction of company personnel matters, and legal and patent matters). Auxiliaries are storage facilities, garages, repair shops, purchasing offices, sales promotion offices, and research laboratories serving the mines, plants, or central management of the company.

The employment and payroll at such offices and auxiliary units are included throughout this report, but they are not counted in the figures for number of establishments.

EXPLANATION OF TERMS

All employees, number.—This item includes all production, development, and exploration workers and all nonproduction personnel at an establishment, including force account construction workers. Employment at separate administrative offices and auxiliaries serving mineral establishments is also included.

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954, the figures represent the average of 12 monthly figures. (For highly seasonal industries, most of those other

than oil and gas extraction, an average employment derived from 12 mid-month pay periods was also obtained and will be included in the final 1963 reports as for previous census years.)

Payroll.--This total includes all forms of compensation (salaries, wages, commissions, bonuses, vacation pay, and other remuneration) paid during the year to all employees described above. Payroll is reported before deductions for Social Security, income tax, group insurance, union dues, etc.

Production, development, and exploration workers, number.--This number includes all workers up through the working foreman level engaged in manual work, using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards. Included are exploration work, mine development, storage, shipping, maintenance, repair, watchmen services, auxiliary production for use at establishments (such as power plant), record keeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and foremen who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also, included are miners paid on a per ton, car, or yard basis and the men engaged by them and paid out of the total amount received by these miners, and other employees at the establishment but not on its payroll if paid directly through its own employees, such as superintendents and foremen. Supervisory employees above the working foreman level are excluded from this category.

Production, development, and exploration workers, man-hours.--This figure includes all man-hours of production, development, and exploration workers (as defined above) which were worked on both active days on which there was production or development work and on inactive days when only watchmen, inspectors, repairmen, and other maintenance men were on duty. They include all man-hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the mine. Included are actual overtime hours, not straight-time equivalent hours. Man-hours of working proprietors are excluded.

Production, development, and exploration workers, wages.--This item consists of that portion of the payroll (as defined above) paid to production, development, and exploration workers of mining establishments.

Value added in mining.--This measure is derived for each mining establishment by subtracting the cost of supplies, minerals received from other establishments for preparation, purchased fuels and electric energy, contract work, goods purchased for resale, and purchased machinery from the value of shipments (including resales) and receipts and capital expenditures.

Value added avoids the duplication in value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

Value of shipments and receipts.--This figure represents the net selling value, f.o.b. mine, after discounts and allowances, of all shipments of products from mining establishments in 1963 plus receipts for miscellaneous activities of such establishments; it excludes freight charges and excise taxes. For products transferred to other establishments of the same company or prepared on a custom basis, the company was requested to report the approximate commercial value not merely the cost of producing the items. The value of shipments for an establishment includes not only (a) the value of products "primary" to the industry, but also (b) the value of "secondary" products (which are primary to other industries), (c) receipts for contract work done for others (except custom milling), and (d) the value of shipments of products purchased and resold without further processing. Receipts for custom milling are omitted from this total (and shown separately in the final reports) to avoid duplication with the value of custom milled ores included in (a) or (b).

For industry and industry group totals, some duplication is introduced by the inclusion of materials transferred from one establishment to another for mineral preparation. (In the final reports, figures are shown both for "gross" and for "net" shipments. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation from the "gross" shipments.)

SUPPLIES AND RELATED COSTS

The Census report forms request information on supplies, fuels, and electric energy used; on contract work done by others; and on purchased machinery installed for each establishment. These items include charges to both the current and capital accounts. The figures reported include items used during the year whether purchased, withdrawn from inventories, or received from other establishments of the company. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges incurred by the establishment in acquiring the items are included. Where the company's records did not show actual amounts used, they were asked to approximate use by adding purchases (or receipts) during the year to opening inventory and subtracting closing inventory.

Separate figures were obtained for (a) selected supplies for some industries; (b) the value of minerals received for preparation; (c) the amount paid for electric energy purchased; (d) the amount

paid for all purchased fuels used for heat, power, or the generation of electricity; (e) the cost of contract work done by others; (f) the cost of products bought and resold in the same condition; and (g) the cost of purchased machinery installed. Supplies and equipment used in mine development and plant expansion and capitalized repairs, which are chargeable to fixed assets accounts, were included as were supplies furnished without charge to contractors for use at the mining operation and also supplies sold to employees for use at the establishment. No data were obtained on such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or on overhead costs, such as depreciation charges, rent, interest, and royalties.

Capital expenditures.---For all mineral establishments in operation or under development during 1963, these figures represent: Expenditures for development and exploration of mineral properties, preparation plant and other construction, (including major alterations, capitalized repairs, and improvements whether on contract or by the plant's own work force); and for new and used machinery

and equipment (including capitalized repairs and improvements to existing machinery and equipment).

1963 CENSUS OF MINERAL INDUSTRIES PUBLICATION PROGRAM

The general statistics for each industry, shown by geographic region and State, as well as figures on the individual products of the industry appear in preliminary reports, Series MIC(P)-10A through MIC(P)-14F. The last of these reports will be published in September 1965. A report showing selected preliminary statistics by size of establishment has been issued and a report showing summary statistics by State for 2-digit industry groups will be issued shortly.

More detailed figures for each industry will appear in the final industry reports and final State reports which are scheduled for publication during the latter part of 1965 and the first half of 1966. (Order forms which list these reports and their prices may be obtained from the U.S. Department of Commerce Field Offices or from the Bureau of the Census, Washington, D.C. 20233.)

Table 1.—GENERAL STATISTICS FOR THE MINERAL INDUSTRIES, IN THE UNITED STATES, BY MAJOR INDUSTRY GROUPS: 1963, 1958, AND 1954

(Represents establishments classified in the mineral industries only. Excludes data for stone, sand and gravel, clay, and gypsum mines operated as parts of manufacturing establishments)

Code	Industry group and year	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	Horse-power rating of power equipment
		Total	With 20 or more employees	Total	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)						
	All mineral industries:													
	1963.....	38,637	5,490	614,227	3,728,763	481,325	969,127	2,669,645	15,826,843	7,974,425	1,100,835	21,652,713	3,249,390	49,853
	1958.....	136,384	16,047	733,904	3,748,821	565,355	1,079,443	2,622,785	13,384,457	6,503,311	1,017,578	18,101,245	2,804,101	(NA)
	1954.....	137,641	16,206	787,127	3,394,844	648,341	1,251,909	2,579,744	11,558,664	24,885,158	1,214,263	21,921,297	2,726,171	40,867
10	Metal mining:													
	1963.....	1,613	292	77,634	520,156	62,017	125,216	381,935	1,413,975	846,059	95,855	2,123,842	232,047	5,953
	1958.....	2,351	386	91,582	486,193	70,750	135,242	355,031	1,180,216	791,073	70,004	1,826,160	215,133	(NA)
	1954.....	3,668	416	101,210	468,735	82,715	170,497	358,002	1,084,142	2,578,769	87,454	2,517,320	222,428	5,236
11	Anthracite mining:													
	1963.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	8,772	236,051	14,945	736
	1958.....	1,248	159	22,813	93,396	20,047	30,867	79,423	164,489	167,197	10,033	325,128	16,591	(NA)
	1954.....	1,436	245	37,462	135,929	33,026	48,266	113,932	196,835	212,820	9,270	408,431	10,494	1,506
12	Bituminous coal and lignite mining:													
	1963.....	6,317	1,172	134,068	761,516	118,622	217,109	647,626	1,625,201	796,834	187,444	2,388,093	221,386	6,742
	1958.....	6,940	1,375	187,963	915,066	163,730	268,170	762,100	1,615,744	851,460	152,194	2,430,908	188,490	(NA)
	1954.....	6,865	1,467	219,206	877,415	199,970	326,457	767,347	1,424,161	648,375	122,318	2,074,767	120,087	6,347
13	Crude petroleum and natural gas extraction:													
	1963.....	21,237	2,440	268,672	1,721,100	191,840	394,544	1,089,000	10,924,538	5,530,973	637,519	14,559,311	2,533,719	26,017
	1958.....	118,522	12,691	312,916	1,700,683	214,001	440,256	1,011,238	9,032,493	4,144,315	655,141	11,637,902	2,194,047	(NA)
	1954.....	117,591	12,768	315,808	1,462,852	235,518	491,793	976,785	3,767,694	4,032,883	865,067	39,341,539	2,228,204	20,104
14	Nonmetallic minerals mining:													
	1963.....	8,407	1,487	122,095	667,335	98,567	212,707	501,498	1,742,646	678,818	171,245	2,345,416	247,293	10,405
	1958 ³	7,323	1,436	118,630	553,483	96,827	204,908	414,991	1,391,515	549,266	130,206	1,881,147	189,840	(NA)
	1954 ⁶	8,081	1,310	113,441	449,913	97,112	214,896	363,678	1,179,849	412,311	130,154	31,577,153	144,958	7,674

(NA) Not available.

¹For 1958 and 1954, figures on number of establishments are not entirely comparable with those for 1963. Companies operating oil and gas field properties were asked to make separate reports for such operations by districts for the States of Louisiana, Texas, and New Mexico for 1963, whereas only one report for each State was required for 1958 and 1954.²Excludes data for the Uranium-Radium-Vanadium Ores Industry.³Excludes figures for Alaska.⁴Excludes the cost of natural gas processed at natural gas liquids plants, but includes the estimated value prior to processing of liquids contained in such gas.⁵Except for number of establishments, excludes data for one crushed stone quarry in Alaska with no employees.⁶Includes data for one crushed stone quarry in Hawaii operated as part of an establishment primarily producing ready-mixed concrete.

Table 2.—GENERAL STATISTICS FOR THE MINERAL INDUSTRIES IN THE UNITED

(Represents establishments classified in the mineral industries only. Excludes data for stone,

		1963										
Code	Industry group and industry	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Contract work only	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)				
	All mineral industries.....	38,637	5,490	614,227	3,728,763	481,325	969,127	2,669,645	15,826,843	7,974,425	1,886,001	1,100,835
	MAJOR INDUSTRY GROUPS											
10	Metal mining.....	1,613	292	77,634	520,156	62,017	125,216	381,935	1,413,975	846,059	109,723	95,855
11	Anthracite mining.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	22,136	8,772
12	Bituminous coal and lignite mining....	6,317	1,172	134,068	761,516	118,622	217,109	647,626	1,625,201	796,834	60,539	187,444
13	Oil and gas extraction.....	21,237	2,440	268,672	1,721,100	191,840	394,544	1,089,000	10,924,538	5,530,973	1,621,020	637,519
14	Nonmetallic minerals mining.....	8,407	1,487	122,095	667,335	98,567	212,707	501,498	1,742,646	678,818	72,583	171,245
	INDUSTRIES											
10	Metal mining.....	1,613	292	77,634	520,156	62,017	125,216	381,935	1,413,975	846,059	109,723	95,855
1011	Iron ores.....	207	100	23,108	161,778	18,095	34,521	112,634	548,502	282,758	54,287	27,885
1021	Copper ores ²	158	40	26,440	187,131	21,363	45,319	142,352	416,997	294,622	30,530	45,567
1031	Lead and zinc ores ³	207	46	9,435	49,365	7,840	14,801	38,000	84,659	59,433	3,557	4,215
	Lead ores ³	125	13	4,324	21,874	3,410	5,965	15,341	34,150	20,919	2,538	1,759
	Zinc ores.....	82	33	5,111	27,491	4,430	8,836	22,659	50,509	38,514	1,019	2,456
104	Gold and silver ores ⁴	465	15	4,208	24,878	3,578	7,596	20,002	48,540	15,866	1,264	2,357
1042	Lode gold ⁴	198	5	2,386	13,820	2,086	4,536	11,382	20,874	7,194	458	807
1043	Placer gold.....	157	2	356	2,214	320	723	1,772	5,794	2,339	343	372
1044	Silver ores.....	110	8	1,466	8,844	1,172	2,337	6,848	21,872	6,333	463	1,178
1051	Bauxite.....	18	4	554	3,416	415	721	2,257	17,484	3,839	1,228	462
106	Ferroalloy ores ⁵	56	10	3,041	20,030	2,542	4,704	14,789	67,243	28,673	3,551	1,484
1062	Manganese ores.....	17	5	224	1,138	180	355	818	2,352	5,085	(NA)	175
1064 and 1069	Tungsten ores and ferroalloy ores, n.e.c. ⁵	39	5	2,817	18,892	2,362	4,349	13,971	64,891	23,588	3,551	1,309
1081	Metal mining services.....	83	14	2,087	12,566	1,789	3,642	10,192	22,818	6,430	(NA)	2,851
109	Miscellaneous metal ores ⁶	419	63	8,761	60,992	6,395	13,912	41,709	207,732	154,438	15,306	11,034
1092	Mercury ores ⁶	49	3	316	1,839	279	610	1,561	2,627	1,278	248	128
1093	Titanium ores.....	8	7	997	6,401	846	1,721	5,131	15,012	7,087	1,480	2,105
1094	Uranium-radium-vanadium ores ⁶	337	51	7,282	51,698	5,139	11,353	34,291	188,495	144,279	13,536	8,575
1099	Metallic ores, n.e.c. ⁶	25	2	166	1,054	131	228	726	1,598	1,794	42	226
11	Anthracite mining.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	22,136	8,772
1111	Anthracite.....	1,021	85	10,671	52,962	9,330	17,728	44,785	110,475	116,232	21,273	6,777
1112	Anthracite mining services.....	42	14	1,087	5,694	949	1,823	4,801	10,008	5,509	863	1,995
12	Bituminous coal and lignite mining....	6,317	1,172	134,068	761,516	118,622	217,109	647,626	1,625,201	796,834	60,539	187,444
1211	Bituminous coal.....	6,130	1,149	132,357	752,663	117,074	214,026	639,885	1,597,228	786,060	58,378	181,763
1212	Lignite.....	59	6	512	2,760	437	871	2,205	11,791	4,017	2,161	2,877
1213	Bituminous coal and lignite mining services.....	128	17	1,199	6,093	1,111	2,212	5,536	16,182	6,757	2,161	2,804
13	Oil and gas extraction.....	21,237	2,440	268,672	1,721,100	191,840	394,544	1,089,000	10,924,538	5,530,973	1,621,020	637,519
1311	Crude petroleum and natural gas.....	14,376	952	142,911	994,620	83,107	165,904	493,988	8,907,401	2,679,178	1,472,642	419,873
	Crude petroleum.....	12,325	788	124,922	879,521	71,403	142,834	426,320	7,729,882	2,311,713	1,281,608	369,811
	Natural gas.....	2,051	164	17,989	115,099	11,704	23,070	67,668	1,177,519	367,465	191,034	50,062
1321	Natural gas liquids.....	650	244	13,741	96,362	12,103	24,726	81,861	783,966	2,239,043	48,877	32,326
138	Oil and gas field services.....	6,211	1,244	112,020	630,118	96,630	203,914	513,151	1,233,171	612,752	99,501	185,320
1381	Drilling oil and gas wells ⁸	2,831	742	54,834	313,671	50,272	103,772	276,945	645,045	354,316	80,391	113,215
1382	Oil and gas field exploration services ⁸	355	67	9,594	55,596	7,229	16,144	36,892	90,028	31,721	5,361	10,051
1389	Oil and gas field services, n.e.c. ⁸	3,025	435	47,592	260,851	39,129	83,998	199,314	498,098	226,715	13,749	62,054
14	Nonmetallic minerals mining ⁹	8,407	1,487	122,095	667,335	98,567	212,707	501,498	1,742,646	678,818	72,583	171,245
1411	Dimension stone.....	319	25	2,181	8,040	1,974	3,806	6,995	14,743	5,242	632	630
	Dimension limestone.....	61	5	351	1,462	287	562	1,111	2,906	707	160	118
	Dimension granite.....	66	10	824	3,601	774	1,635	3,277	6,458	3,027	181	156
	Dimension stone, n.e.c. ⁹	192	10	1,006	2,977	913	1,609	2,607	5,379	1,508	291	356
1421	Crushed and broken stone ⁹	2,258	670	43,398	230,060	36,303	80,935	178,336	581,179	237,505	23,457	59,855
	Crushed and broken limestone.....	1,614	496	31,290	161,708	26,442	59,471	127,324	409,241	153,740	16,310	40,795
	Crushed and broken granite ⁹	150	65	4,060	19,826	3,449	7,894	16,009	61,697	28,746	2,182	6,486
	Crushed and broken stone, n.e.c. ⁹	494	109	8,048	48,526	6,412	13,570	35,003	110,241	55,019	4,965	12,574

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

7

STATES, 88 INDUSTRY GROUPS AND INDUSTRIES: 1963 AND 1958

sand and gravel, clay, and gypsum mines operated as parts of manufacturing establishments)

1963—Continued		1958												
Value of shipments and receipts	Capital expenditures	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	Code
		Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages						
(\$1,000)	(\$1,000)				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	
21,652,713	3,249,390	136,384	16,047	733,904	3,748,821	565,355	1,079,443	2,622,785	13,384,457	6,503,311	1,017,578	18,101,245	2,804,101	
2,123,842	232,047	2,351	386	91,582	486,193	70,750	135,242	355,031	1,180,216	791,073	70,004	1,826,160	215,133	10
236,051	14,945	1,248	159	22,813	93,396	20,047	30,867	79,425	164,489	167,197	10,033	325,128	16,591	11
2,388,093	221,386	6,940	1,375	187,963	915,066	163,730	268,170	762,100	1,615,744	851,460	152,194	2,430,908	188,490	12
14,559,311	2,533,719	118,522	12,691	312,916	1,700,683	214,001	440,256	1,011,238	9,032,493	4,144,315	655,141	11,637,902	2,194,047	13
2,345,416	247,293	7,323	1,436	118,630	553,483	96,827	204,908	414,991	1,391,515	549,266	130,206	1,881,147	189,840	14
2,123,842	232,047	2,351	386	91,582	486,193	70,750	135,242	355,031	1,180,216	791,073	70,004	1,826,160	215,133	10
762,548	96,597	243	128	30,113	169,043	28,517	38,926	116,319	487,667	200,928	18,483	664,475	42,603	1011
670,162	87,024	157	38	27,642	143,501	20,898	41,021	106,357	266,485	216,842	19,191	457,644	44,874	1021
136,210	12,097	290	52	11,227	54,397	8,728	16,734	39,001	73,679	52,581	2,920	120,561	8,619	1031
50,582	6,246	213	26	6,883	33,759	5,460	10,397	24,843	48,023	30,446	1,630	75,603	4,496	
85,628	5,851	77	26	4,344	20,638	3,268	6,337	14,158	25,656	22,135	1,290	44,958	4,123	
60,172	6,591	477	23	4,415	23,217	3,841	8,230	19,753	42,146	14,675	1,682	54,691	3,812	104
26,630	2,245	251	12	2,586	12,447	2,234	4,602	10,709	22,659	7,811	764	29,506	1,728	1042
7,515	990	165	6	840	5,013	753	1,882	4,204	9,123	3,816	617	12,628	928	1043
26,027	3,356	61	5	989	5,757	854	1,746	4,840	10,364	3,048	301	12,557	1,156	1044
21,517	268	29	9	705	3,606	502	905	2,290	15,430	2,669	1,483	18,174	1,408	1051
89,790	7,610	297	33	5,438	26,711	4,380	8,335	19,455	74,255	41,653	2,158	111,521	6,545	106
7,227	385	186	22	2,099	9,036	1,792	3,475	7,244	20,014	20,476	1,085	39,385	2,190	1062
82,563	7,225	111	11	3,339	17,675	2,588	4,860	12,211	54,241	21,177	1,073	72,136	4,355	1064 and 1069
29,091	3,008	95	23	2,184	12,097	1,973	4,274	10,624	22,862	9,420	1,365	32,384	1,263	1081
354,352	18,852	763	80	9,790	53,093	7,851	16,673	40,800	196,488	251,635	22,720	365,234	105,609	109
3,716	317	81	9	652	3,112	569	1,223	2,627	7,093	2,006	370	8,607	862	1092
22,033	2,171	11	7	962	4,496	706	1,234	2,882	12,746	5,064	1,831	17,158	2,483	1093
325,569	15,780	603	61	7,939	44,422	6,389	13,873	34,439	174,802	243,122	20,092	336,451	101,565	1094
3,034	584	68	3	237	1,063	187	343	852	1,847	1,443	427	3,018	699	1099
236,051	14,945	1,248	159	22,813	93,396	20,047	30,867	79,425	164,489	167,197	10,033	325,128	16,591	11
220,840	12,644	1,163	117	19,712	79,473	17,266	26,409	67,449	142,198	154,631	6,317	290,342	12,804	1111
15,211	2,301	85	42	3,101	13,923	2,781	4,458	11,976	22,291	12,566	3,716	34,786	3,787	1112
2,388,093	221,386	6,940	1,375	187,963	915,066	163,730	268,170	762,100	1,615,744	851,460	152,194	2,430,908	188,490	12
2,351,086	213,965	6,725	1,346	185,933	905,041	161,908	264,779	753,320	1,591,321	843,433	147,732	2,398,224	184,262	1211
14,052	4,633	58	8	510	2,693	437	844	2,261	9,309	1,636	1,522	11,035	1,432	1212
22,955	2,788	157	21	1,520	7,332	1,385	2,547	6,519	15,114	6,391	2,940	21,649	2,796	1213
14,559,311	2,533,719	118,522	12,691	312,916	1,700,683	214,001	440,256	1,011,238	9,032,493	4,144,315	655,141	11,637,902	2,194,047	13
9,812,893	2,193,559	112,010	11,093	180,121	1,043,108	102,485	201,009	497,867	7,739,922	2,510,308	486,886	7,885,906	1,947,634	1311
8,523,233	1,888,173	10,620	975	164,804	966,780	92,398	181,325	453,243	7,682,328	2,257,489	444,031	7,809,898	1,711,374	
1,289,660	305,386	1,390	118	15,317	76,328	10,087	19,684	44,624	516,594	252,819	42,855	576,008	236,260	
2,939,534	115,801	593	290	16,514	96,319	13,445	26,947	75,739	587,580	1,092,612	39,836	1,625,098	94,930	1321
1,806,884	224,359	5,919	1,308	116,281	561,256	98,071	212,300	437,632	7,107,787	541,395	128,419	7,162,583	151,483	138
968,375	144,201	3,066	821	59,411	289,243	52,274	109,470	239,328	587,440	335,060	84,457	904,939	102,018	1381
119,802	11,998	348	76	9,557	43,649	7,559	16,695	31,115	64,353	23,869	6,075	87,215	7,082	1382
718,707	68,160	2,505	411	47,278	228,023	38,212	86,060	166,926	455,994	182,104	37,843	633,729	42,212	1389
2,345,416	247,293	7,323	1,436	118,630	553,483	96,827	204,908	414,991	1,391,515	549,266	130,206	1,881,147	189,840	14
19,697	918	335	26	2,306	7,121	2,055	3,690	6,067	13,076	3,458	531	15,864	1,201	1411
3,513	218	68	8	583	2,120	491	879	1,592	3,741	641	294	4,174	502	
9,388	253	76	9	740	2,288	681	1,277	2,046	4,085	1,620	89	5,577	217	
6,796	447	191	9	983	2,713	883	1,534	2,429	5,250	1,197	148	6,113	482	
796,075	82,464	1,970	651	41,730	189,801	35,148	76,212	148,408	449,419	188,780	51,828	620,681	69,346	1421
544,205	59,571	1,463	487	31,507	143,705	26,453	57,262	111,551	334,803	140,280	39,088	459,643	54,528	
89,744	7,185	122	61	3,309	12,975	2,906	6,442	10,771	33,493	14,968	5,838	49,596	4,703	
162,126	15,708	385	103	6,914	33,121	5,789	12,508	26,086	81,123	33,532	6,902	111,442	10,115	

Table 2.—GENERAL STATISTICS FOR THE MINERAL INDUSTRIES IN THE UNITED

Code	Industry group and industry	1963										
		Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Contract work only	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)				
INDUSTRIES—Continued												
14	Nonmetallic minerals mining—Continued											
1441	Sand and gravel.....	4,619	514	41,048	219,687	33,188	70,713	170,239	510,766	181,337	21,568	58,331
	Construction sand and gravel.....	4,422	463	37,273	198,788	30,128	63,962	154,317	455,270	163,333	20,446	53,451
	Glass sand.....	39	22	1,567	9,140	1,223	2,738	6,649	22,611	7,465	333	2,958
	Molding sand.....	93	13	952	4,644	794	1,689	3,902	13,834	4,154	524	606
	Industrial sand, n.e.c.....	65	16	1,256	7,115	1,043	2,324	5,371	19,051	6,385	265	1,316
145	Clay and related minerals.....	418	111	8,464	42,837	7,210	15,042	33,882	113,681	51,684	4,493	10,228
1452	Bentonite.....	44	16	809	4,135	647	1,512	3,149	11,540	6,881	1,361	1,139
1453	Fire clay.....	153	15	1,093	4,749	898	1,699	3,810	12,682	4,697	829	1,850
1454	Fuller's earth.....	15	9	769	3,096	664	1,386	2,443	9,241	4,230	367	801
1455	Kaolin and ball clay.....	47	27	3,398	18,253	2,888	6,045	14,298	49,938	17,632	562	3,429
1456	Feldspar.....	31	10	466	2,001	394	850	1,750	6,099	3,326	(NA)	732
1459	Clay and related minerals, n.e.c.....	128	34	1,929	10,603	1,719	3,550	8,432	24,181	14,918	1,374	2,277
147	Chemical and fertilizer minerals....	236	105	20,760	134,140	14,606	31,211	85,627	435,758	169,739	19,400	33,807
1472	Barite.....	54	13	1,434	6,799	918	1,887	3,590	11,123	5,920	956	726
1473	Fluorspar.....	30	7	788	3,806	683	1,346	3,035	8,869	6,968	333	270
1474	Potash, soda, borate minerals.....	27	16	6,792	49,072	4,825	9,858	32,905	156,204	50,986	8,012	11,780
1475	Phosphate rock.....	66	38	5,624	31,955	3,999	9,047	20,627	94,880	74,099	9,648	14,885
1476	Rock salt.....	25	15	2,439	15,949	1,809	4,251	11,125	49,563	11,970	(NA)	5,157
1477	Sulfur.....	17	10	2,603	20,597	1,600	3,264	10,566	100,349	13,041	451	799
1479	Chemical-fertilizer mining, n.e.c.	17	6	1,080	5,962	772	1,558	3,779	14,770	6,755	(NA)	190
1481	Nonmetallic minerals services.....	117	11	849	4,469	789	1,543	4,014	8,631	4,630	(NA)	1,216
149	Miscellaneous minerals, n.e.c.....	440	51	5,395	28,102	4,497	9,457	22,405	77,888	28,681	3,033	7,178
1492	Gypsum.....	37	6	458	2,406	383	807	1,913	7,753	2,822	(NA)	864
1493	Mica.....	34	5	404	1,586	336	723	1,285	4,232	2,025	187	481
1494	Native asphalt and bitumens.....	14	4	425	2,253	360	734	1,734	6,375	2,657	(NA)	627
1495	Pumice and pumicite.....	85	1	247	1,056	222	428	981	4,303	1,334	264	369
1496	Talc, soapstone, and pyrophyllite.	65	9	1,261	6,524	1,042	2,212	5,313	13,673	4,411	(NA)	481
1497	Natural abrasives, except sand....	22	4	279	1,480	199	423	964	4,169	1,187	(NA)	73
1498	Peat.....	109	4	504	1,778	442	948	1,473	5,719	1,867	132	809
1499	Nonmetallic minerals, n.e.c.....	74	18	1,817	11,019	1,513	3,182	8,742	31,664	12,378	2,450	3,474

(NA) Not available.

¹Not entirely comparable with figures for 1963 since operators of oil and gas field properties were asked to make separate reports by districts for the States of Louisiana, Texas, and New Mexico for 1963, whereas only one report for each State was required for 1958.²For 1958, except for number of establishments, excludes data for 9 establishments in Alaska, each with less than 5 employees.³For 1958, except for number of establishments, excludes data for 2 establishments with no employees in Alaska.⁴For 1958, except for number of establishments, excludes data for 7 establishments in Alaska, each with less than 20 employees.⁵For 1958, except for number of establishments, excludes data for 3 establishments with no employees in Alaska.⁶For 1958, except for number of establishments, excludes data for establishments in Alaska. The number of establishments excluded were: 2 in mercury ores with total employment in the range 10-19; one in uranium-radium-vanadium ores with employment in the range 0-4; and 2 in metallic ores, n.e.c., with total employment in the range 20-49.

STATES, BY INDUSTRY GROUPS AND INDUSTRIES: 1963 AND 1958—Continued

1963—Continued		1958												
Value of shipments and receipts	Capital expenditures	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	Code
		Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages						
(\$1,000)	(\$1,000)				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	
674,675	75,759	3,708	484	37,159	172,757	30,729	66,674	134,820	435,439	144,789	38,502	562,138	56,592	1441
603,044	69,010	¹⁰ 3,539	¹⁰ 449	¹⁰ 34,275	¹⁰ 159,815	¹⁰ 28,367	¹⁰ 61,927	¹⁰ 125,181	¹⁰ 402,671	¹⁰ 132,389	¹⁰ 35,210	¹⁰ 517,422	¹⁰ 52,848	
29,098	3,936	45	19	1,628	7,497	1,339	2,833	5,730	20,672	8,014	2,360	28,343	2,703	
17,651	943	124	16	1,256	5,445	1,023	1,914	3,909	12,096	4,386	932	16,373	1,041	
24,882	1,870	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	(¹⁰)	
160,995	14,598	490	112	8,773	36,157	7,298	14,897	26,880	87,368	39,223	9,344	122,738	13,197	145
18,197	1,363	41	15	688	2,885	543	1,140	1,996	12,220	4,697	1,009	16,843	1,083	1452
17,202	2,027	182	19	1,473	6,020	1,279	2,214	4,989	14,540	4,478	1,695	18,606	2,107	1453
13,083	1,189	14	6	652	2,399	527	1,145	1,673	5,955	3,053	263	8,692	579	1454
65,807	5,192	53	26	3,394	14,014	2,722	5,675	9,719	30,990	12,682	2,913	42,434	4,151	1455
8,459	1,698	74	10	567	1,919	496	1,028	1,515	4,531	2,387	1,277	6,889	1,306	1456
38,247	3,129	126	36	1,999	8,920	1,731	3,695	6,988	19,132	11,926	2,187	29,274	3,971	1459
579,319	59,985	264	102	21,899	120,611	15,881	32,031	78,306	337,312	149,283	23,405	470,729	39,271	147
16,668	1,101	53	8	929	3,402	781	1,588	2,698	11,321	3,169	251	13,768	973	1472
15,792	315	55	11	1,235	5,616	1,044	2,105	4,336	12,653	8,126	764	19,977	1,566	1473
192,197	26,773	21	14	6,661	41,067	4,590	9,212	26,746	111,082	34,490	6,936	141,115	11,393	1474
161,658	22,206	65	37	5,393	27,210	3,955	8,255	17,185	64,375	67,326	6,095	132,094	5,702	1475
59,294	7,396	22	12	1,984	10,996	1,602	3,508	7,937	34,073	8,222	2,125	41,813	2,607	1476
113,103	1,086	24	13	3,677	24,570	2,303	4,644	13,267	94,063	21,344	7,077	106,202	16,282	1477
20,607	1,108	24	7	2,020	7,750	1,606	2,719	6,137	9,745	6,606	157	15,760	748	1479
13,014	1,463	75	6	1,109	3,522	1,037	1,893	3,038	6,217	1,865	700	7,934	848	1481
101,641	12,106	481	55	5,654	23,514	4,679	9,511	17,472	62,684	21,868	5,896	81,063	9,385	149
10,160	1,279	32	4	406	1,805	354	776	1,481	5,958	1,332	578	7,048	820	1492
5,838	900	149	8	727	2,007	649	1,204	1,709	4,974	1,841	577	6,221	1,171	1493
8,573	1,086	10	5	464	2,265	367	732	1,398	5,954	2,293	517	8,041	723	1494
5,324	682	70	2	354	1,218	303	471	1,002	4,387	1,408	312	5,482	625	1495
17,352	1,213	64	12	1,294	5,320	1,123	2,289	4,157	11,755	3,542	509	14,908	898	1496
4,921	508	20	4	229	1,007	204	408	801	2,648	786	88	3,373	149	1497
7,378	1,017	81	3	389	1,282	335	613	974	3,640	1,104	446	4,379	811	1498
42,095	5,421	55	17	1,791	8,610	1,344	3,018	5,950	23,368	9,562	2,869	31,611	4,188	1499

⁷Excludes data for Alaska.⁸For 1958, except for number of establishments, excludes data for establishments in Alaska. The number of establishments excluded were: 2 in drilling oil and gas wells services, one with employment in the range 20-49 and one smaller establishment, and one each in oil and gas field exploration services and in oil and gas field services, n.e.c., with employment less than 20 for each.⁹For 1958, except for number of establishments, excludes data for one establishment with no employees in Alaska.¹⁰Figures for industrial sand, n.e.c., are included with those for construction sand and gravel.

PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume 1, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.



U.S. DEPARTMENT OF COMMERCE
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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-2

SUMMARY SERIES

preliminary
report

General Statistics for Geographic Divisions and States

This report presents preliminary results from the 1963 Census of Mineral Industries for each geographic division and State. Figures are shown for each of the five major groups within mining.

The figures in this report represent general statistics by industry group by State for 1963 and 1958, usually as published in the preliminary industry reports for the 1963 Census of Mineral Industries. These figures will be superseded in final State reports which, in turn, will be included in Volume II, Area Statistics, 1963 Census of Mineral Industries. No adjustments in the dollar figures have been made for changes in price or wage levels between the two census years, 1958 and 1963.

The largest mineral producing State in 1963, as in 1958, was Texas, according to preliminary results obtained from the 1963 Census of Mineral Industries conducted by the Bureau of the Census, Department of Commerce. The value of shipments in Texas in 1963 was \$5.6 billion, amounting to 26 percent of the total for all States. Average employment in Texas was 111 thousand, 18 percent of the total for all States; and value added in mining was \$4.2 billion, 27 percent of the all States total. In terms of value of shipments, the second ranking State was Louisiana, with shipments of \$3.4 billion, employment 45 thousand, and value added \$2.6 billion. The next ten ranking States in order of importance, as measured by value of shipments, were California, Oklahoma, West Virginia, Pennsylvania, New Mexico, Illinois, Kansas, Wyoming, Kentucky, and Minnesota. In terms of employment, the ranking was somewhat different, reflecting the higher labor requirements per dollar of shipments for coal mining than for oil and gas field operations. Pennsylvania ranked second in employment, with 49 thousand employees, shipments of \$0.9 billion, and value added of \$0.6 billion. The next ten ranking States in terms of employment were West Virginia, Louisiana, California, Oklahoma,

Kentucky, Illinois, Ohio, New Mexico, Virginia, and Arizona.

For metal mining, the first three ranking States in terms of value of shipments were Minnesota, Arizona, and Utah and in terms of employment Arizona, Minnesota, and Utah. The State of Minnesota, with value of metal mining shipments of \$0.5 billion, accounted for 23 percent of all shipments by metal mining operations in 1963. The next five ranking metal mining States in terms of value of shipments were New Mexico, Michigan, Colorado, Montana, and Wyoming.

For coal mining, the first three ranking States in terms of value of shipments and employment were West Virginia, Pennsylvania, and Kentucky. Value of shipments for coal mining establishments in West Virginia and Pennsylvania each amounted to about \$0.7 billion, the two States accounting for 54 percent of the value of shipments for coal mining in all States. The next five ranking coal mining States in terms of value of shipments were Illinois, Ohio, Virginia, Alabama, and Indiana.

For oil and gas extraction, the first three ranking States, in terms of value of shipments, were Texas, Louisiana, and California, and in terms of employment Texas, Louisiana, and Oklahoma. Texas accounted for 38 percent of the shipments for these industries in all States, with total shipments of \$5.5 billion. The next five ranking States in terms of value of shipments for these industries were Oklahoma, New Mexico, Kansas, Wyoming, and Illinois.

For the nonmetallic minerals (except fuels) mining industries, the first three ranking States in terms of value of shipments were California, Florida, and Texas, and in terms of employment California, Texas, and Illinois. However, California shipments for these industries amounted to only \$0.3 billion, or 11 percent of the total for

October 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



all States. The next five States in terms of value of shipments were New Mexico, Ohio, New York, Georgia, and Louisiana.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

INDUSTRY CLASSIFICATION

In the census of mineral industries, figures are collected from each establishment primarily engaged in the extraction of minerals occurring naturally. This census includes establishments primarily engaged in exploration and development of mineral properties and contract service establishments primarily engaged in work for others on mineral properties. In general, crushing, screening, washing, concentrating, and other preparation operations needed to render the material marketable are included, whether or not the preparation plants are located at the mines served. Smelting of metallic ores, petroleum refining, and production of cement, clay products, and concrete products are excluded and classified in the manufacturing industries.

Mining operations not within the scope of the minerals census are secondary activities at manufacturing or other nonmanufacturing establishments, such as stone quarries at cement, lime, and dimension stone dressing plants; sand and gravel mines at ready-mixed concrete and concrete products plants; clay pits at structural clay products plants and pottery plants; and gypsum mines at gypsum products plants. The approximate values of such excluded mineral production in 1963 and 1958 were \$394 million and \$362 million respectively, all of which represents mineral products for which the primary production is classified in Major Group 14—Nonmetallic Minerals (Except Fuels) Mining.

Each establishment is classified in a particular industry according to the SIC system on the basis of the value of its principal products. The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) are reported for each establishment as a whole. Therefore, the aggregates for each industry reflect not only the primary production statistics of the establishments classified in that industry but also their production of secondary products and receipts for other activities (principally contract work performed for others). The extent to which establishments classified in an industry specialize in producing products regarded as primary to that industry is shown in reports in the industry series.

The SIC system combines the 50 individual mining industries into 20 industry groups which

are, in turn, combined into 5 major industry groups. Each individual industry is designated by a 4-digit code, each industry group by a 3-digit code identical with the first three digits of its component industries, and each major industry group by a 2-digit code identical with the first two digits of its component industry groups.

All reports of the 1963 census are based upon the 1957 edition of the Standard Industrial Classification Manual published by the Bureau of the Budget, as amended by the "Supplement to the 1957 Edition" (1958).

ESTABLISHMENT STATISTICS

In the minerals census, data are obtained for the operations of an entire establishment showing output in terms of quantity and value; operating and development costs; and labor, materials, supplies, and equipment requirements. Mining operations are classified by industry on the basis of the value of the principal mineral produced, or, if there was no production, on the basis of the principal mineral for which exploration or development was in process. For most mineral industries, secondary mineral products are of little statistical importance. The most significant exceptions are for establishments producing complex ores containing copper, lead, zinc, gold, and silver and for wells which produce both oil and gas. A mineral establishment is generally defined as a single physical location where mineral operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. For oil and gas field operations, only one report was required for all oil and gas field operations of a company for each State, except that district reports were obtained for Louisiana, Texas, and New Mexico. For mineral services, which frequently operate over a wide geographic area, only one report was usually required for all such operations in the United States.

A separate report is obtained for each establishment with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Firms operating more than one establishment are required to submit a separate report for each separate location. Also, companies engaged in distinctly different lines of activity at one location submit separate reports if the company records permit such a separation and if the company activities are substantial in size.

CENTRAL ADMINISTRATIVE OFFICES AND AUXILIARY UNITS

Respondents were asked to file separate reports for any central administrative offices or auxiliary units which were: (1) at different locations from the establishments served or, (2) at the same location as one of these establishments, but were not operated as an integral part thereof and served two or more establishments. The functions of employees in central administrative offices include: general company policy determination, planning and management (i.e., company purchasing, accounting, general engineering, direction of company personnel matters, and legal and patent matters). Auxiliaries are storage facilities, garages, repair

shops, purchasing offices, sales promotion offices, and research laboratories serving the mines, plants, or central management of the company.

The employment and payroll at such offices and auxiliary units are included throughout this report, but they are not counted in the figures for number of establishments.

EXPLANATION OF TERMS

All employees, number.—This item includes all production, development, and related workers and all nonproduction personnel at an establishment, including force account construction workers. Employment at separate administrative offices and auxiliaries serving mineral establishments is also included.

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954, the figures represent the average of 12 monthly figures. (For highly seasonal industries, most of those other than oil and gas extraction, an average employment derived from 12 mid-month pay periods was also obtained and will be included in the final 1963 reports as for previous census years.)

Payroll.—This total includes all forms of compensation (salaries, wages, commissions, bonuses, vacation pay, and other remuneration) paid during the year to all employees derived above. Payroll is reported before deductions for Social Security, income tax, group insurance, union dues, etc.

Production, development, and exploration workers, number.—This number includes all workers up through the working foreman level engaged in manual work, using tools, operating machines, hauling materials, loading and hauling products out of the mine in mine cars or trucks, and caring for mines, plants, mills, shops, or yards. Included are exploration work, mine development, storage, shipping, maintenance, repair, watchmen services, auxiliary production for use at establishments (such as power plant), record keeping, and other services closely associated with these production and development operations at the establishment covered by the report. Gang and straw bosses and foremen who performed manual labor are included, as are employees paid on either a time- or piece-rate basis. Also included are miners paid on a per ton, car, or yard basis and the men engaged by them and paid out of the total amount received by these miners, and other employees at the establishment but not on its payroll if paid directly

through its own employees, such as superintendents and foremen. Supervisory employees above the working foreman level are excluded from this category.

Production, development, and exploration workers, man-hours.—This figure includes all man-hours of production, development, and exploration workers (as defined above) which were worked on both active days on which there was production or development work and on inactive days when only watchmen, inspectors, repairmen, and other maintenance men were on duty. They include all man-hours worked or paid for at the mining operations, except hours paid for vacations, holidays, or sick leave, when the employee was not at the mine. Included are actual overtime hours, not straight-time equivalent hours. Man-hours of working proprietors are excluded.

Production, development, and exploration workers, wages.—This item consists of that portion of the payroll (as defined above) paid to production, development, and exploration workers of mining establishments.

Value added in mining.—This measure is derived for each mining establishment by subtracting the cost of supplies, minerals received from other establishments for preparation, purchased fuels and electric energy, contract work, goods purchased for resale, and purchased machinery from the value of shipments (including resales) and receipts and capital expenditures.

Value added avoids the duplication in value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure available for comparing the relative economic importance of mining among industries and geographic areas.

Value of shipments and receipts.—This figure represents the net selling value, f.o.b. mine, after discounts and allowances, of all shipments of products from mining establishments in 1963 plus receipts for miscellaneous activities of such establishments; it excludes freight charges and excise taxes. For products transferred to other establishments of the same company or prepared on a custom basis, the company was requested to report the approximate commercial value not merely the cost of producing the items. The value of shipments for an establishment includes not only (a) the value of products "primary" to the industry but also (b) the value of "secondary" products (which are primary to other industries), (c) receipts for contract work done for others (except custom milling) and (d) the value of shipments of products purchased and resold without further processing. Receipts for custom milling are omitted from this total (and shown separately in the final reports) to avoid duplication with the value of custom milled ores included in (a) or (b).

For industry and industry group totals, some duplication is introduced by the inclusion of

materials transferred from one establishment to another for mineral preparation. (In the final reports, figures are shown both for "gross" and for "net" shipments. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation from the "gross" shipments.)

Supplies and Related Costs.—The Census report forms request information on supplies, fuels, and electric energy used; on contract work done by others; and on purchased machinery installed for each establishment. These items include charges to both the current and capital accounts. The figures reported include items used during the year whether purchased, withdrawn from inventories, or received from other establishments of the company. The cost data refer to direct charges actually paid or payable (after discounts) for items used during the year. Freight charges and other direct charges incurred by the establishment in acquiring the items are included. Where the company's records did not show actual amounts used, they were asked to approximate use by adding purchases (or receipts) during the year to opening inventory and subtracting closing inventory.

Separate figures were obtained for (a) selected supplies for some industries; (b) the value of minerals received for preparation; (c) the amount paid for electric energy purchased; (d) the amount paid for all purchased fuels used for heat, power, or the generation of electricity; (e) the cost of contract work done by others; (f) the cost of products bought and resold in the same condition; and (g) the cost of purchased machinery installed. Supplies and equipment used in mine development and plant expansion and capitalized repairs, which are chargeable to fixed assets accounts, were included as were supplies furnished without charge to contractors for use at the mining operation and

also supplies sold to employees for use at the establishment. No data were obtained on such costs as advertising, insurance, telephone, and research and consulting services of other establishments; or on overhead costs, such as depreciation charges, rent, interest, and royalties.

Capital expenditures.—For all mineral establishments in operation or under development during 1963, these figures represent: Expenditures for development and exploration of mineral properties, preparation plant and other construction (including major alterations, capitalized repairs, and improvements whether on contract or by the plant's own work force); and for new and used machinery and equipment (including capitalized repairs and improvements to existing machinery and equipment).

1963 CENSUS OF MINERAL INDUSTRIES PUBLICATION PROGRAM

The general statistics for each industry, shown by geographic region and State, as well as figures on the individual products of the industry appear in preliminary reports, Series MIC(P)-10A through MIC(P)-14F. The last of these reports will be published in September 1965. A report showing selected preliminary statistics by size of establishment has been issued and a report showing summary statistics by industry groups and industries will be issued shortly.

More detailed figures for each industry will appear in the final industry reports and final State reports which are scheduled for publication during the latter part of 1965 and the first half of 1966. (Order forms which list these reports and their prices may be obtained from the U.S. Department of Commerce field offices or from the Bureau of the Census, Washington, D.C. 20233.)

CENSUS REGIONS AND GEOGRAPHIC DIVISIONS OF THE UNITED STATES



U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS

(Represents establishments classified in the mineral industries only. Excludes data for stone, sand and

Code	Industry group and geographic area	1963									
		Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)			
1	United States, total.....	38,637	5,490	614,227	3,728,763	481,325	969,127	2,669,645	15,826,843	7,974,425	1,100,835
2	10 Metal mining.....	1,613	292	77,634	520,156	62,017	125,216	381,935	1,413,975	846,059	95,855
3	11 Anthracite mining.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	8,772
4	12 Bituminous coal and lignite mining.....	6,317	1,172	134,068	761,516	118,622	217,109	647,626	1,625,201	796,834	187,444
5	13 Oil and gas extraction.....	21,237	2,440	268,672	1,721,100	191,840	394,544	1,089,000	10,924,538	5,530,973	637,519
6	14 Nonmetallic minerals mining.....	8,407	1,487	122,095	667,335	98,567	212,707	501,498	1,742,646	678,818	171,245
7	New England, total.....	349	57	3,895	22,591	3,137	6,731	16,601	41,999	15,751	5,191
8	10 Metal mining.....	4	1	214	2,120	23	47	200	334	46	-
9	14 Nonmetallic minerals mining.....	345	56	3,681	20,471	3,114	6,684	16,401	41,665	15,705	5,191
10	Maine.....	44	2	208	786	190	415	703	1,529	507	252
11	New Hampshire (nonmetallic minerals mining).....	32	3	217	1,180	167	375	863	2,184	1,068	320
12	Vermont (nonmetallic minerals mining).....	44	10	835	4,137	739	1,581	3,451	8,779	2,837	384
13	Massachusetts.....	127	23	1,626	9,966	1,192	2,514	6,436	16,544	5,979	2,683
14	Rhode Island (nonmetallic minerals mining).....	21	4	200	1,127	173	358	894	2,050	802	118
15	Connecticut.....	81	15	809	5,395	676	1,488	4,254	10,913	4,558	1,434
16	Middle Atlantic, total.....	4,072	516	62,774	364,708	50,757	99,481	272,486	737,728	424,362	71,265
17	10 Metal mining.....	24	17	4,151	42,911	4,301	8,218	25,774	76,156	33,018	3,850
18	11 Anthracite mining.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	8,772
19	12 Bituminous coal mining.....	1,212	189	24,555	144,147	21,145	39,460	116,300	280,366	171,593	36,533
20	13 Oil and gas extraction.....	932	40	5,896	30,002	3,910	7,957	18,104	59,628	24,413	4,271
21	14 Nonmetallic minerals mining.....	841	171	14,628	91,112	11,122	24,295	62,722	201,095	73,597	17,839
22	New York, total.....	519	70	9,896	71,720	6,628	14,000	41,305	129,125	43,910	7,962
23	10 Metal mining.....	8	7	2,423	26,817	1,898	3,609	12,169	35,605	15,354	1,647
24	13 Oil and gas extraction.....	191	7	1,041	6,777	651	1,380	3,313	9,247	4,509	565
25	14 Nonmetallic minerals mining.....	320	56	5,432	38,126	4,079	9,011	25,823	84,273	24,047	5,750
26	New Jersey, total.....	157	44	3,772	23,890	2,885	6,375	16,591	54,973	20,341	4,753
27	10 Metal mining.....	7	4	737	4,168	624	1,210	3,345	9,237	1,693	396
28	14 Nonmetallic minerals.....	150	40	3,035	19,722	2,261	5,165	13,246	45,736	18,648	4,357
29	Pennsylvania, total.....	3,396	402	49,106	269,098	41,244	79,106	214,590	553,630	360,111	58,550
30	10 Metal mining.....	9	6	2,016	12,362	1,779	3,399	10,260	31,314	15,971	1,807
31	11 Anthracite mining.....	1,063	99	11,758	58,656	10,279	19,551	49,586	120,483	121,741	8,772
32	12 Bituminous coal mining.....	1,212	189	24,316	141,591	21,145	39,460	116,300	280,366	171,593	36,533
33	13 Oil and gas extraction.....	741	33	4,855	23,225	3,259	6,577	14,791	50,381	19,904	3,706
34	14 Nonmetallic minerals mining.....	371	75	6,161	33,264	4,782	10,119	23,653	71,086	30,902	7,732
35	East North Central, total.....	4,743	574	62,665	375,456	51,056	101,975	287,553	1,051,963	537,980	106,665
36	10 Metal mining.....	48	33	7,646	51,991	6,005	11,611	35,854	109,730	116,710	8,701
37	12 Bituminous coal mining.....	575	171	20,600	136,891	17,718	34,465	114,186	315,970	127,425	48,666
38	13 Oil and gas extraction.....	2,230	124	12,582	63,506	10,150	19,373	47,457	337,820	195,581	19,430
39	14 Nonmetallic minerals mining.....	1,890	246	21,837	123,068	17,183	36,526	90,056	288,443	98,264	29,868
40	Ohio, total.....	1,540	181	17,702	104,656	14,328	28,726	76,278	224,750	108,458	30,042
41	12 Bituminous coal mining.....	396	84	8,504	51,363	7,252	14,001	42,243	108,905	63,638	18,419
42	13 Oil and gas extraction.....	657	22	2,583	12,486	2,013	4,046	8,817	31,063	18,358	3,169
43	10 and 14 Metal mining and nonmetallic minerals mining.....	487	75	6,615	40,807	5,063	10,679	25,218	84,782	26,462	8,454
44	Indiana, total.....	723	77	7,435	42,935	5,971	11,908	32,902	107,293	39,502	16,005
45	12 Bituminous coal mining.....	73	20	2,986	19,886	2,598	4,793	16,848	46,256	11,323	10,439
46	13 Oil and gas extraction.....	346	12	1,506	7,475	1,049	1,830	4,022	25,055	14,981	1,550
47	14 Nonmetallic minerals mining.....	304	45	2,943	15,574	2,324	5,285	12,032	35,982	13,198	4,016
48	Illinois, total.....	1,443	208	22,112	135,327	17,995	36,100	104,950	451,963	216,478	40,862
49	12 Bituminous coal mining.....	106	67	9,110	65,642	7,868	15,671	55,095	160,809	52,464	19,808
50	13 Oil and gas extraction.....	937	70	6,472	31,575	5,457	10,340	25,272	216,177	128,375	12,214
51	10 and 14 Metal mining and nonmetallic minerals mining.....	400	71	6,530	38,110	4,670	10,089	24,583	74,977	35,639	8,840
52	Michigan, total.....	691	79	12,324	75,622	10,250	20,226	60,202	230,480	155,277	15,395
53	10 Metal mining.....	31	26	6,359	40,373	5,474	10,626	33,087	100,082	103,941	8,574
54	13 Oil and gas extraction.....	290	20	2,021	11,970	1,631	3,157	9,346	65,525	33,867	2,497
55	14 Nonmetallic minerals mining.....	370	33	3,944	23,279	3,145	6,443	17,769	64,873	17,469	4,324
56	Wisconsin, total.....	346	29	3,092	16,916	2,512	5,015	13,221	37,477	18,265	4,361
57	10 Metal mining.....	11	4	322	1,710	279	478	1,429	5,452	2,025	127
58	14 Nonmetallic minerals mining.....	335	25	2,770	15,206	2,233	4,537	11,792	32,025	16,240	4,234

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

7

INDUSTRY GROUPS, BY GEOGRAPHIC AREAS: 1963 AND 1958

gravel, clay, and gypsum mines operated as parts of manufacturing establishments.)

1963—Continued		1958												
Value of shipments and receipts	Capital expenditures	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	
		Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages						
(\$1,000)	(\$1,000)				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	
21,652,713	3,249,390	136,384	16,047	733,904	3,748,821	565,355	1,079,443	2,622,785	13,384,457	6,503,311	1,017,578	18,101,245	2,804,101	1
2,123,842	232,047	2,351	386	91,582	486,193	70,750	135,242	355,031	1,180,216	791,073	70,004	1,826,160	215,133	2
236,051	14,945	1,248	159	22,813	93,396	20,047	30,867	79,425	164,489	167,197	10,033	325,128	16,591	3
2,388,093	221,386	6,940	1,375	187,963	915,066	163,730	263,170	762,100	1,615,744	851,460	152,194	2,430,908	188,490	4
14,559,311	2,533,719	18,522	2,691	312,916	1,700,683	214,001	440,256	1,011,238	9,032,493	4,144,315	655,141	11,637,902	2,194,047	5
2,345,416	247,293	7,323	1,436	118,630	553,483	96,827	204,908	414,991	1,391,515	549,266	130,206	1,881,147	189,840	6
55,959	6,982	344	39	23,616	217,477	2,745	5,744	11,760	32,301	13,010	2,693	44,034	3,970	7
377	3	4	1	33	185	31	61	174	440	76	-	516	-	8
55,582	6,979	340	38	3,295	15,088	2,714	3,683	11,586	31,861	12,934	2,693	43,518	3,970	9
1,968	320	55	2	301	1,005	266	547	883	2,104	902	252	2,826	432	10
3,102	470	38	3	234	951	200	413	708	1,977	939	174	2,866	224	11
11,083	917	41	7	790	3,205	674	1,350	2,528	6,823	3,065	381	9,575	694	12
22,098	3,108	111	12	1,285	7,077	824	1,750	3,887	10,624	3,792	962	14,151	1,227	13
2,714	256	18	3	147	583	117	218	452	1,377	314	161	1,630	222	14
14,994	1,911	81	12	859	4,656	664	1,466	3,302	9,396	3,998	763	12,986	1,171	15
1,125,157	108,198	4,500	636	87,398	418,758	72,795	124,374	324,407	733,341	454,175	65,188	1,160,015	92,689	16
107,625	5,399	24	19	6,166	33,669	4,159	7,819	21,553	51,903	31,223	2,840	79,401	6,565	17
236,051	14,945	1,248	159	22,813	93,396	20,047	30,867	79,425	164,489	167,197	10,033	325,128	16,591	18
443,876	44,616	1,373	233	37,438	186,121	32,264	52,239	150,420	291,778	167,116	32,155	457,632	33,417	19
70,997	17,315	1,065	50	6,577	29,048	5,183	10,095	20,138	59,217	28,504	4,325	76,709	15,337	20
266,608	25,923	790	175	14,404	76,524	11,142	23,354	52,871	165,954	60,135	15,835	221,145	20,779	21
165,659	15,338	543	69	29,657	257,027	6,405	13,626	34,002	115,960	38,493	5,930	147,603	12,780	22
49,136	3,470	11	9	3,295	18,569	1,738	3,502	9,504	32,635	16,036	333	46,567	2,437	23
11,019	3,302	235	7	1,094	6,033	699	1,331	2,575	7,447	2,819	363	8,758	1,871	24
105,504	8,566	297	53	5,186	31,633	3,968	8,793	21,923	75,878	19,638	5,234	92,278	8,472	25
72,581	7,486	135	42	3,748	19,485	2,812	5,593	13,366	37,638	12,599	2,311	48,651	3,897	26
10,597	729	5	5	1,029	5,106	838	1,339	4,078	8,667	2,333	20	10,088	932	27
61,984	6,757	130	37	2,719	14,379	1,974	4,254	9,288	28,971	10,266	2,291	38,563	2,965	28
886,917	85,374	3,822	525	73,993	342,246	63,578	105,155	277,039	579,743	403,083	56,947	963,761	76,012	29
47,892	1,200	8	5	1,842	9,994	1,583	2,978	7,971	10,601	12,854	2,487	22,746	3,196	30
236,051	14,945	1,248	159	22,813	93,396	20,047	30,867	79,425	164,489	167,197	10,033	325,128	16,591	31
443,876	44,616	1,373	233	37,438	186,121	32,264	52,239	150,420	291,778	167,116	32,155	457,632	33,417	32
59,978	14,013	830	43	5,483	23,015	4,484	8,764	17,563	51,770	25,685	3,962	67,951	13,466	33
99,120	10,600	363	85	6,499	30,512	5,200	10,307	21,660	61,105	30,231	8,310	90,304	9,342	34
1,490,452	206,156	4,313	659	74,732	385,398	60,937	114,357	292,921	936,363	441,476	73,860	1,324,808	126,891	35
177,841	57,300	59	41	10,026	52,693	8,097	14,008	40,867	87,682	54,939	3,602	128,274	17,949	36
435,986	56,075	626	202	25,301	143,411	21,651	38,322	116,869	284,145	131,673	28,145	414,498	29,465	37
497,914	54,917	1,932	156	16,320	74,173	12,541	22,854	49,914	305,524	165,766	20,515	445,215	46,590	38
378,711	37,864	1,696	260	23,085	115,121	18,648	39,173	85,271	259,012	89,098	21,598	336,821	32,887	39
317,124	46,126	1,436	187	20,790	108,307	15,907	29,764	73,356	191,336	104,866	19,213	286,321	29,094	40
168,671	22,291	394	97	10,036	53,872	8,368	14,538	41,836	100,958	68,173	9,596	166,657	12,070	41
41,011	11,579	587	18	3,926	19,570	2,295	4,149	8,089	23,588	15,313	3,133	32,990	9,044	42
107,442	12,256	455	72	6,828	34,865	5,244	11,077	23,431	66,790	21,380	6,484	86,674	7,980	43
143,697	19,103	720	95	8,768	43,549	7,076	13,069	32,432	102,989	36,373	12,479	136,511	15,330	44
58,165	9,853	91	34	4,105	22,858	3,412	5,726	18,218	44,289	15,362	6,208	61,060	4,799	45
37,311	4,275	352	14	1,649	6,960	1,210	2,004	4,069	28,794	10,237	2,196	36,175	5,052	46
48,221	4,975	277	47	3,014	13,731	2,454	5,339	10,145	29,906	10,774	4,075	39,276	5,479	47
652,658	56,645	1,323	253	27,112	142,651	22,848	43,151	113,007	452,357	208,231	31,155	638,774	52,969	48
209,150	23,931	141	71	11,140	66,595	9,871	18,058	56,815	138,898	48,138	12,341	186,781	12,596	49
333,155	23,611	799	104	9,017	38,878	7,610	13,665	30,878	229,372	128,252	13,601	342,134	29,091	50
110,353	9,103	383	78	6,955	37,178	5,367	11,428	25,314	84,087	31,841	5,213	109,859	11,282	51
322,304	78,848	539	87	14,326	73,218	11,865	22,065	59,292	158,001	76,842	8,450	218,308	24,985	52
155,841	56,756	40	34	8,291	42,044	6,850	11,860	34,825	78,991	49,074	3,334	114,509	16,890	53
86,437	15,452	194	20	1,728	8,765	1,426	3,036	6,878	23,770	11,964	1,585	33,916	3,403	54
80,026	6,640	305	33	4,307	22,409	3,589	7,169	17,589	55,240	15,804	3,531	69,883	4,692	55
54,669	5,434	295	37	23,736	217,673	3,241	6,308	14,834	31,680	15,164	2,563	44,894	4,513	56
7,279	325	12	4	1,199	6,077	1,087	1,808	5,275	6,931	3,483	225	9,735	904	57
47,390	5,109	283	33	2,517	11,510	2,154	4,500	9,559	24,749	11,681	2,338	35,159	3,609	58

Code	Industry group and geographic area	1963									
		Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)			
1	West North Central, total.....	3,547	398	44,193	250,598	34,906	70,170	180,897	1,053,970	513,145	72,619
2	Metal mining.....	139	56	15,930		12,319					
3	Bituminous coal and lignite mining.....				116,123	1,219	25,679	78,210	398,683	178,720	25,512
4	Oil and gas extraction.....	1,877	175	14,491	77,291	11,523	22,970	56,590	523,095	278,156	30,637
5	Nonmetallic minerals mining.....	1,403	149	11,739	57,184	9,845	21,521	46,097	132,192	56,269	16,470
6	Iowa, total.....	329	66	13,129	89,991	9,904	18,830	59,279	365,749	151,185	10,273
7	Metal mining.....	76	48	11,437	81,684	8,510	16,206	52,811	349,058	143,523	8,730
8	Nonmetallic minerals mining.....	253	18	1,692	8,307	1,394	2,624	6,468	16,691	7,662	1,543
9	Missouri, total.....	291	34	2,660	13,365	2,257	5,264	10,453	33,040	13,746	3,456
10	Bituminous coal mining.....	35	4	288	1,222	268	550	1,107	3,380	889	637
11	Nonmetallic minerals mining.....	256	30	2,372	12,143	1,989	4,714	9,346	29,660	12,857	2,819
12	Illinois, total.....	428	67	7,947	38,818	5,958	11,572	27,708	67,264	38,162	14,278
13	Metal mining.....	24	5	2,502		2,064					
14	Bituminous coal mining.....	35	6	1,134	18,427	415	4,125	11,741	19,639	19,833	7,024
15	Oil and gas extraction.....	20	1	236	1,389	28	53	179	529	243	50
16	Nonmetallic minerals mining.....	349	55	4,075	19,002	3,451	7,394	15,788	47,096	18,086	7,204
17	North Dakota.....	188	24	1,724	10,853	1,366	2,840	7,633	72,468	29,543	8,775
18	Oil and gas extraction.....	96	14	1,090	7,738	843	1,791	5,112	56,120	24,379	5,403
19	South Dakota.....	130	13	2,524	13,577	2,220	4,904	11,670	25,592	14,031	1,380
20	Oil and gas extraction.....	14	-	13	67	11	23	61	254	1,518	86
21	Nebraska, total.....	368	22	2,132	11,174	1,713	3,757	8,606	68,252	24,275	4,375
22	Oil and gas extraction.....	177	11	941	5,473	730	1,437	4,047	56,642	18,886	2,433
23	Nonmetallic minerals mining.....	191	11	1,191	5,701	983	2,320	4,559	11,610	5,389	1,942
24	Kansas, total.....	1,813	172	14,077	72,820	11,488	23,003	55,548	421,605	242,203	30,082
25	Metal mining.....	6	-	52		44					
26	Bituminous coal mining.....	14	3	264	2,242	238	590	1,937	4,497	1,450	5,759
27	Oil and gas extraction.....	1,570	149	12,211	62,624	9,911	19,666	47,191	399,550	233,130	22,665
28	Nonmetallic minerals mining.....	223	20	1,550	7,954	1,295	2,747	6,420	17,558	7,623	1,658
29	South Atlantic, total.....	4,433	807	81,989	433,322	72,051	140,237	365,021	1,013,474	602,536	88,201
30	Metal mining.....	35	9	1,056	5,388	821	1,630	3,619	13,600	6,808	1,323
31	Bituminous coal mining.....	2,426	458	53,321	298,720	48,075	87,878	260,445	611,745	298,454	47,135
32	Oil and gas extraction.....	1,080	39	5,165	23,511	4,173	8,442	18,026	76,765	145,780	6,028
33	Nonmetallic minerals mining.....	892	301	22,447	105,703	18,982	42,287	82,931	311,364	151,494	33,715
34	Delaware, Maryland, and the District of Columbia, total.....	179	33	2,371	12,312	2,039	4,321	9,598	35,743	14,203	2,581
35	Metal mining and oil and gas extraction.....	6	-	37	178	33	67	156	810	1,462	53
36	Bituminous coal mining.....	65	4	425	1,510	413	701	1,463	4,232	1,627	180
37	Nonmetallic minerals mining.....	108	29	1,909	10,624	1,593	3,553	7,979	30,701	11,114	2,348
38	Virginia, total.....	947	213	15,598	66,756	13,918	25,366	57,742	145,998	83,270	10,913
39	Metal mining.....	5	3	396	1,851	318	615	1,309	4,401	2,346	315
40	Bituminous coal mining.....	775	141	11,487	48,827	10,411	17,765	43,343	99,298	63,837	6,764
41	Oil and gas extraction.....	10	-	9	49	8	16	37	771	118	-
42	Nonmetallic minerals mining.....	157	69	3,706	16,029	3,181	6,970	13,053	41,528	16,969	3,834
43	West Virginia, total.....	2,695	369	47,641	277,100	42,399	79,751	238,014	596,074	340,000	47,499
44	Bituminous coal mining.....	1,583	313	41,403	248,372	37,246	69,405	215,629	508,198	232,986	40,191
45	Oil and gas extraction.....	1,052	38	4,948		4,090					
46	Nonmetallic minerals mining.....	60	18	1,290	28,728	1,063	10,346	22,385	87,876	107,014	7,308
47	North Carolina.....	165	45	2,559	10,646	2,197	4,820	8,376	31,490	13,295	4,027
48	South Carolina.....	67	25	1,651	6,734	1,460	3,294	5,568	19,407	8,479	1,559
49	Georgia.....	164	62	5,629	27,105	4,886	10,565	22,031	75,367	32,546	7,738
50	Metal mining.....	19	2	146	644	104	201	341	1,393	544	321
51	Nonmetallic minerals mining.....	142	60	5,477	26,450	4,777	10,357	21,680	73,957	31,998	7,417
52	Florida.....	216	60	6,540	32,669	5,152	12,120	23,692	109,395	110,743	13,884
53	East South Central, total.....	3,336	569	49,274	241,367	43,234	80,806	202,018	760,092	399,315	71,374
54	Metal mining.....	45	19	1,922	10,660	1,645	3,450	8,646	21,929	9,253	1,274
55	Bituminous coal mining.....	1,697	281	28,707	141,372	26,113	45,289	124,894	319,297	160,900	38,961
56	Oil and gas extraction.....	1,051	101	8,820	46,138	6,984	13,368	33,006	288,707	174,530	17,454
57	Nonmetallic minerals mining.....	543	168	9,825	43,197	8,492	18,699	35,472	130,159	54,632	13,685
58	Kentucky, total.....	2,086	322	28,056	132,483	25,167	45,404	115,905	343,985	208,408	44,350
59	Bituminous coal mining.....	1,223	222	21,073	102,416	19,221	33,549	91,544	227,102	124,478	34,194
60	Oil and gas extraction.....	690	40	3,984	16,977	3,384	6,140	13,813	76,865	69,432	6,260
61	Nonmetallic minerals mining.....	173	60	2,999	13,090	2,562	5,715	10,548	40,018	14,498	3,896
62	Tennessee, total.....	502	84	6,819	32,182	5,996	12,159	27,011	91,683	40,954	8,016
63	Metal mining.....	12	8	917	5,130	769	1,628	4,131	9,577	5,743	872
64	Bituminous coal mining.....	275	16	1,880	8,187	1,689	2,842	7,210	20,519	7,892	2,069
65	Oil and gas extraction.....	19	1	21	61	16	33	45	244	177	1
66	Nonmetallic minerals mining.....	196	59	4,001	18,804	3,522	7,656	15,625	61,343	27,142	5,074

See footnotes at end of table.

GENERAL STATISTICS FOR ALL MINERAL INDUSTRIES AND MAJOR INDUSTRY

Code	Industry group and geographic area	1963									
		Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)			
	East South Central--Continued										
1	Alabama, total	377	91	9,083	46,800	8,054	15,140	39,137	123,699	55,925	7,668
2	10 Metal mining	33	11	1,005	5,530	876	1,822	4,515	12,352	3,510	402
3	12 Bituminous coal mining	199	43	5,754	30,769	5,203	8,898	26,140	71,676	28,530	2,698
4	13 Oil and gas extraction	41	4	417	2,510	339	837	1,926	19,414	14,445	909
5	14 Nonmetallic minerals mining	104	33	1,907	7,991	1,636	3,583	6,556	20,257	9,440	3,659
6	Mississippi, total	371	72	5,316	29,902	4,017	8,103	19,965	200,725	94,028	11,340
7	13 Oil and gas extraction	301	56	4,398	26,590	3,245	6,358	17,222	192,184	90,476	10,284
8	14 Nonmetallic minerals mining	70	16	918	3,312	772	1,745	2,743	8,541	3,552	1,056
9	West South Central, total	12,131	1,726	192,908	1,241,674	135,626	285,001	763,242	7,738,207	3,859,723	464,488
10	10 Metal mining	58	10	1,238	9,694	980	2,761	7,471	37,119	13,745	1,487
11	12 Bituminous coal and lignite mining	46	8	591	3,882	534	961	2,801	18,534	3,668	645
12	13 Oil and gas extraction	11,362	1,552	178,329	1,166,576	123,994	259,800	707,998	7,479,421	3,773,008	449,012
13	14 Nonmetallic minerals mining	665	156	12,750	65,404	10,118	22,440	47,773	221,667	72,970	13,989
14	Arkansas, total ¹⁰	423	60	4,759	23,632	3,995	8,116	18,799	109,591	54,735	8,061
15	10 Metal mining	16	5	544	3,882	416	961	2,801	18,534	3,668	645
16	12 Bituminous coal mining	18	1	109	3,882	107	961	2,801	18,534	3,668	645
17	13 Oil and gas extraction	285	30	2,272	11,235	1,871	3,587	8,676	67,497	37,271	5,180
18	14 Nonmetallic minerals mining ¹⁰	104	24	1,834	8,515	1,601	3,568	7,322	23,560	13,796	2,236
19	Louisiana, total	1,457	348	45,333	312,474	34,799	76,176	213,360	2,612,737	1,383,999	174,701
20	13 Oil and gas extraction	1,356	314	42,068	294,323	32,303	70,647	200,654	2,530,141	1,363,740	170,240
21	14 Nonmetallic minerals mining ¹¹	101	34	3,265	18,151	2,496	5,529	12,706	82,596	20,259	4,461
22	Oklahoma, total ¹²	2,517	298	32,187	188,975	21,338	41,192	106,147	812,808	383,553	59,838
23	10 Metal mining	22	2	269	3,062	197	985	2,490	5,556	5,197	623
24	12 Bituminous coal mining	25	6	350	3,062	320	985	2,490	5,556	5,197	623
25	13 Oil and gas extraction	2,359	270	30,330	180,273	19,771	37,905	99,015	792,212	373,104	57,960
26	14 Nonmetallic minerals mining ¹²	111	20	1,238	5,640	1,050	2,302	4,642	15,040	5,252	1,255
27	Texas, total ¹³	7,734	1,020	110,629	716,593	75,494	159,517	424,936	4,203,071	2,037,436	221,888
28	10 Metal mining	20	3	425	2,750	367	815	2,180	13,029	4,880	219
29	12 Lignite mining	3	1	132	2,750	107	815	2,180	13,029	4,880	219
30	13 Oil and gas extraction	7,362	938	103,659	680,745	70,049	147,661	399,653	4,089,571	1,998,893	215,632
31	14 Nonmetallic minerals mining ¹³	349	78	6,413	33,098	4,971	11,041	23,103	100,471	33,663	6,037
32	Mountain, total	3,656	511	76,924	507,886	61,689	126,921	385,191	2,082,676	1,072,040	157,037
33	10 Metal mining	920	132	40,864	276,906	33,787	70,830	218,480	744,935	479,225	60,384
34	12 Bituminous coal and lignite mining	211	42	3,865	22,101	3,462	5,762	19,395	56,540	26,852	4,318
35	13 Oil and gas extraction	1,820	254	21,430	143,195	15,579	32,497	96,110	1,101,848	491,411	73,898
36	14 Nonmetallic minerals mining ¹³	705	83	10,765	65,684	8,861	17,832	51,206	179,353	74,552	18,437
37	Montana, total	413	40	7,553	47,031	6,093	12,522	35,309	111,003	102,941	42,361
38	10 Metal mining	79	7	4,293	27,389	3,541	7,168	20,666	29,138	59,714	28,776
39	12 Bituminous coal and lignite mining	30	-	82	27,389	76	7,168	20,666	29,138	59,714	28,776
40	13 Oil and gas extraction	235	29	2,274	14,338	1,664	3,645	9,933	72,258	37,386	11,043
41	14 Nonmetallic minerals mining	69	4	904	5,304	812	1,709	4,710	9,607	5,841	2,542
42	Idaho, total	146	14	3,258	19,139	2,788	5,502	15,486	40,002	15,675	1,431
43	10 Metal mining	86	10	2,774	16,096	2,358	4,641	12,971	31,369	11,054	773
44	14 Nonmetallic minerals mining	60	4	484	3,043	430	861	2,515	8,633	4,621	658
45	Wyoming, total	529	98	8,595	59,502	6,497	13,710	42,436	449,850	156,960	25,471
46	10 Metal mining	42	15	1,661	13,424	1,268	3,341	10,152	55,548	32,425	1,276
47	12 Bituminous coal mining	20	7	360	13,424	309	3,341	10,152	55,548	32,425	1,276
48	13 Oil and gas extraction	412	60	5,296	38,259	3,910	8,281	26,365	369,456	113,746	22,161
49	14 Nonmetallic minerals mining	55	16	1,278	7,819	1,010	2,088	5,919	24,846	10,789	2,034
50	Colorado, total	858	83	11,304	74,078	8,367	16,245	48,134	247,747	106,729	12,448
51	10 Metal mining	237	20	5,146	30,110	4,230	8,064	23,209	94,857	52,517	2,340
52	12 Bituminous coal mining	100	16	1,374	8,118	1,242	2,205	7,211	19,470	5,239	1,635
53	13 Oil and gas extraction	355	35	3,565	28,175	1,889	3,989	12,959	120,470	43,640	7,231
54	14 Nonmetallic minerals mining ¹³	166	12	1,219	6,223	1,006	1,987	4,755	12,950	5,333	1,242
55	New Mexico, total	869	149	17,596	114,526	13,715	27,905	85,173	639,569	340,863	39,423
56	10 Metal mining	68	18	4,183	30,110	3,118	6,779	22,068	110,016	57,936	6,882
57	12 Bituminous coal mining	21	3	317	1,863	273	440	1,525	110,016	1,839	1,159
58	13 Oil and gas extraction	682	112	8,953	54,115	7,053	14,188	40,502	440,762	250,709	24,938
59	14 Nonmetallic minerals mining	98	16	4,143	28,438	3,271	6,498	21,078	88,791	30,379	6,444
60	Arizona	260	39	15,192	107,488	12,794	28,673	88,832	289,169	128,427	13,057
61	10 Metal mining	152	29	14,203	103,087	11,939	27,030	85,176	278,814	124,046	12,050
62	13 Oil and gas extraction	19	-	43	158	34	64	127	420	1,347	65
63	14 Nonmetallic minerals mining	85	10	940	4,211	815	1,569	3,497	9,899	3,020	942

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

11

GROUPS, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

1963—Continued		1958													
Value of shipments and receipts	Capital expenditures	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures		
		Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages						(\$1,000)	(\$1,000)
(\$1,000)	(\$1,000)				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	
170,498	16,794	316	83	11,939	55,059	10,555	17,501	45,551	127,055	72,291	10,355	196,029	13,672	1	
15,800	464	33	14	2,702	12,785	2,339	4,031	10,984	43,133	34,575	2,939	77,235	3,412	2	
97,064	5,840	151	40	7,484	35,606	6,649	10,330	28,970	59,345	26,251	4,309	85,873	4,032	3	
29,621	5,147	51	6	338	1,758	306	656	1,545	12,063	7,771	1,853	17,613	4,074	4	
28,013	5,343	81	23	1,415	4,910	1,261	2,484	4,052	12,514	3,694	1,254	15,308	2,154	5	
265,535	40,558	255	64	5,302	26,551	4,126	8,790	18,958	135,339	74,046	11,135	188,013	32,507	6	
253,582	39,362	198	50	4,449	23,698	3,397	7,181	16,658	126,678	70,767	10,424	176,542	31,327	7	
11,953	1,196	57	14	853	2,853	729	1,609	2,300	8,661	3,279	711	11,471	1,180	8	
10,268,363	1,794,055	10,055	1,896	225,847	1,230,869	151,662	320,153	719,543	6,156,371	2,828,582	464,944	7,914,441	1,535,456	9	
50,815	1,536	67	16	2,742	13,822	2,142	4,164	10,480	39,458	10,790	2,519	50,057	2,710	10	
9,929,718	1,771,723	19,347	1,704	209,976	1,157,889	138,968	292,342	665,589	5,931,822	2,757,332	444,913	7,630,431	1,503,636	11	
287,830	20,796	560	160	13,029	59,158	10,552	23,647	43,474	185,091	60,460	17,512	233,953	29,110	12	
155,121	17,266	441	61	5,302	23,425	4,074	7,924	16,362	110,530	34,398	7,814	136,473	16,269	14	
22,249	598	41	12	1,149	5,216	900	1,590	3,800	18,700	3,517	1,653	22,097	1,773	15	
96,169	13,779	294	32	2,806	13,407	2,038	3,941	8,754	80,331	26,719	4,835	98,569	13,316	16	
36,703	2,889	77	13	1,347	4,802	1,136	2,393	3,808	11,499	4,162	1,326	15,807	1,180	17	
3,414,091	757,346	1,121	134	46,136	264,929	33,268	75,422	174,570	1,527,697	800,519	144,851	1,902,976	570,091	19	
3,313,166	750,955	1,026	130	42,398	246,492	30,540	69,316	162,636	1,458,127	778,359	135,544	1,820,772	551,258	20	
100,925	6,391	95	38	3,738	18,437	2,728	6,106	11,934	69,570	22,160	9,307	82,204	18,833	21	
1,050,666	205,533	2,642	342	38,237	195,321	24,659	47,635	104,668	673,995	312,430	60,422	860,630	186,217	22	
10,764	612	26	3	1,083	5,480	883	1,720	4,549	10,423	5,470	450	15,599	744	23	
1,020,342	202,934	2,486	314	35,926	184,880	22,742	43,596	96,013	653,855	301,983	58,566	830,280	184,124	24	
19,560	1,987	95	17	1,228	4,961	1,034	2,319	4,106	9,717	4,977	1,406	14,751	1,349	25	
5,648,485	813,910	15,851	1,149	136,129	747,505	89,707	189,267	424,183	3,846,417	1,681,649	251,858	5,017,044	762,880	26	
17,802	326	14	3	510	3,126	359	854	2,131	10,335	1,803	416	12,361	193	27	
5,500,041	804,055	15,541	1,052	128,846	713,110	83,648	175,489	398,186	3,739,509	1,650,271	245,968	4,880,810	754,938	28	
130,642	9,529	293	92	6,773	31,269	5,700	12,924	23,866	96,573	29,575	5,474	123,873	7,749	29	
2,884,797	426,956	13,800	1,565	84,891	463,056	64,682	128,705	329,590	1,744,065	1,039,423	142,611	2,445,608	480,491	30	
1,165,944	118,600	1,393	175	44,680	238,238	35,721	71,164	182,693	570,739	506,960	43,243	968,300	152,642	31	
81,404	6,306	221	48	5,735	28,744	5,005	7,915	24,190	48,790	32,056	5,385	78,062	8,169	32	
1,402,804	264,353	1,600	1,275	24,636	143,511	16,027	33,879	82,988	973,962	454,914	80,940	1,208,363	301,453	33	
234,645	37,697	586	67	9,840	52,563	7,929	15,747	39,719	150,574	45,493	13,043	190,883	18,227	34	
189,363	66,942	440	39	8,448	44,116	5,824	10,994	27,859	115,932	80,319	7,466	180,292	23,425	35	
83,203	34,425	118	11	5,356	26,363	3,775	6,937	17,309	34,330	46,913	1,844	78,531	4,556	36	
93,698	26,989	232	20	1,777	804	157	258	705	1,106	405	219	1,502	228	37	
12,462	5,528	57	6	2,190	13,133	1,268	2,564	6,699	70,239	29,574	5,125	87,597	17,341	38	
				725	3,816	624	1,235	3,146	10,257	3,427	278	12,662	1,300	39	
51,945	5,163	170	22	3,932	20,886	3,305	6,344	16,366	36,815	16,985	1,195	52,084	2,911	40	
39,341	3,855	111	16	3,372	18,225	2,840	5,517	14,323	30,255	13,233	871	41,779	2,580	41	
12,604	1,308	54	6	1,560	14,261	1,465	14,827	14,204	146,560	143,752	14,324	141,305	14,331	42	
556,090	76,191	489	86	8,545	48,522	5,954	11,897	30,641	342,350	109,889	18,715	404,870	66,084	43	
85,239	4,010	80	4	940	5,186	782	1,619	4,238	21,564	24,741	720	37,201	9,824	44	
435,760	69,603	344	63	6,093	36,400	3,988	8,156	21,186	299,175	77,749	16,092	339,254	53,762	45	
35,091	2,578	42	12	974	4,779	759	1,556	3,593	16,921	5,739	1,616	22,198	2,078	46	
335,073	31,851	967	129	14,109	76,236	9,854	19,015	47,493	249,446	140,759	31,374	362,473	59,106	47	
142,890	6,824	381	37	5,763	28,821	4,680	9,185	22,104	70,130	80,119	12,633	141,830	21,052	48	
24,033	2,311	105	21	2,016	9,628	1,800	2,807	8,359	16,348	3,814	884	19,698	1,348	49	
150,316	21,025	341	62	5,252	32,482	2,465	5,018	12,655	151,420	52,394	17,277	185,346	35,745	50	
17,834	1,691	140	9	1,078	5,305	909	2,005	4,375	11,548	4,432	580	15,599	961	51	
875,688	144,167	1,761	114	17,483	97,213	13,541	28,068	70,076	531,972	348,992	47,837	704,630	224,171	52	
166,004	9,910	110	20	4,206	24,165	3,502	7,373	18,686	82,423	97,509	8,886	118,649	70,169	53	
599,886	116,523	1,556	108	9,030	48,982	6,745	14,405	33,852	381,223	234,482	32,910	500,858	147,757	54	
109,798	15,816	73	13	4,091	23,478	3,161	6,065	17,023	67,142	16,709	5,459	84,340	4,970	55	
385,518	45,135	320	40	15,283	79,872	12,136	24,540	61,656	189,015	84,336	6,012	249,442	29,921	56	
372,361	42,549	202	37	14,682	77,922	11,604	23,590	60,045	185,566	80,751	5,619	243,456	28,480	57	
593	1,239	23	—	1,566	15,276	1,553	1,597	1,188	(16)	15,798	1,564	15,203	15,700	58	
12,518	1,343	93	3	535	1,674	479	853	1,423	4,408	1,787	329	5,783	741	59	

GENERAL STATISTICS FOR ALL MINERAL INDUSTRIES AND MAJOR INDUSTRY

Code	Industry group and geographic area	1963									
		Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed
		Total	With 20 or more employees	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)			
1	Mountain—Continued										
2	10 Utah, total.....	383	70	10,700	68,903	9,103	17,348	55,442	266,119	187,462	19,813
3	12 Metal mining.....	151	22	6,476	43,907	5,527	10,581	34,865	130,923	117,098	6,664
4	13 Bituminous coal mining.....	36	16	1,726	9,941	1,556	2,502	8,784	23,337	16,272	1,382
5	14 Oil and gas extraction.....	113	18	1,273	8,038	1,004	2,274	6,117	98,233	44,439	8,357
6	14 Nonmetallic minerals mining.....	83	14	1,225	7,017	1,016	1,991	5,676	13,626	9,653	3,410
7	Nevada, total.....	198	18	2,726	17,219	2,332	5,016	14,379	39,217	32,983	3,033
8	10 Metal mining.....	105	11	2,128	13,478	1,806	3,831	11,216	27,967	27,923	1,765
9	13 Oil and gas extraction.....	4	-	26	112	25	56	107	249	144	103
10	14 Nonmetallic minerals mining.....	89	7	572	3,629	501	1,129	3,056	11,001	4,916	1,165
11	Pacific, total.....	2,370	332	39,605	291,161	28,869	57,805	196,636	1,346,734	549,573	63,995
12	10 Metal mining.....	340	15	2,827	21,419	2,136	4,493	13,623	46,361	18,438	4,779
13	12 Bituminous coal and lignite mining.....	22	5	396	3,349	356	752	2,464	6,411	1,706	376
14	13 Oil and gas extraction.....	885	155	21,959	170,881	15,527	30,137	111,709	1,057,254	448,094	36,789
15	14 Nonmetallic minerals mining.....	1,123	157	14,423	95,512	10,850	22,423	68,840	236,708	81,335	22,051
16	Washington, total.....	251	21	1,879	12,017	1,554	3,058	9,673	24,836	12,046	2,332
17	10 Metal mining.....	47	5	713	4,439	605	1,171	3,496	10,260	3,873	206
18	12 Bituminous coal mining.....	11	2	143	1,227	78	142	660	14,576	1,695	16
19	13 Oil and gas extraction.....	14	2	1,023	6,351	871	1,745	5,517	6,478	6,478	2,110
20	14 Nonmetallic minerals mining.....	179	12	1,935	11,233	1,568	3,024	8,813	18,015	9,959	2,416
21	Oregon, total.....	206	21	1,935	11,233	1,568	3,024	8,813	18,015	9,959	2,416
22	10 Metal mining.....	25	1	119	736	101	199	598	(15)	803	201
23	13 Oil and gas extraction.....	7	-	11	79	5	13	35	(16)	1,182	3
24	14 Nonmetallic minerals mining.....	174	20	1,805	10,418	1,462	2,812	8,180	¹⁹ 18,866	7,974	2,212
25	California, total.....	1,732	268	34,168	254,112	24,352	48,847	167,469	1,247,592	484,647	55,871
26	{ 10 and 12 } Metal mining and lignite mining.....	185	7	1,900	15,264	1,365	2,875	8,958	30,100	12,475	4,253
27	13 Oil and gas extraction.....	834	140	21,049	162,149	14,822	28,796	105,178	1,018,776	407,331	34,461
28	14 Nonmetallic minerals mining.....	713	121	11,219	76,699	8,165	17,176	53,333	198,716	64,841	17,157
29	Alaska, total.....	137	18	1,318	12,141	1,107	2,316	9,230	51,315	41,086	3,075
30	10 Metal mining.....	84	2	297	2,103	250	555	1,588	5,180	1,769	123
31	12 Bituminous coal mining.....	10	3	194	2,226	171	445	1,447	5,204	1,224	372
32	13 Oil and gas extraction.....	30	13	756	7,426	622	1,186	5,836	39,999	37,886	2,309
33	14 Nonmetallic minerals mining.....	13	-	71	386	64	130	359	932	207	271
34	Hawaii (nonmetallic minerals mining).....	44	4	305	1,658	288	560	1,451	4,976	1,835	301

- Represents zero.

¹Not entirely comparable with the figures shown for 1963. Companies operating oil and gas field properties were asked to make separate reports for such operations by districts for the States of Louisiana, Texas, and New Mexico for 1963, whereas only one report for each State was required for 1958.²Includes figures for separately reported central offices and related facilities in the Bituminous Coal Industry.³For 1958, except for number of establishments, data for one nonmetallic minerals mine are included with those for metal mining.⁴Includes figures for metal mining in New England.⁵Includes figures for separately reported central offices and related facilities in the Bituminous Coal Industry in New England.⁶Excludes figures for the Uranium-Radium-Vanadium Ores Industry.⁷Includes figures for separately reported central offices and related facilities in the Crude Petroleum and Natural Gas Industry.⁸Includes figures for one metal mining establishment with employment in the range 1-4.⁹For 1958, includes figures for the Kentucky operations of four service establishments primarily engaged in metal mining services in other States.¹⁰For 1958, except for number of establishments, includes data for two establishments classified in manufactures.

GROUPS, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

1963—Continued		1958												
Value of shipments and receipts	Capital expenditures	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	
		Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages						
(\$1,000)	(\$1,000)				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	
420,570	52,824	450	79	14,014	79,907	11,598	22,851	62,855	246,198	224,588	22,368	428,030	65,124	1
240,418	14,267	246	30	17,203	17,529	17,618	17,152	17,415	17,147	17,139	17,498	17,283	17,140	2
39,213	1,778	35	17	2,830	15,539	2,472	4,037	12,959	25,417	25,876	3,413	49,808	4,898	3
122,107	28,922	97	22	1,981	12,071	1,508	3,632	8,380	73,003	58,737	9,457	95,055	46,142	4
18,832	7,857	72	10	(17)	(17)	(17)	(17)	(17)	(17)	(17)	(17)	(17)	(17)	5
70,550	4,683	203	28	3,077	16,304	2,470	4,996	12,644	32,337	33,555	7,644	63,787	9,749	6
54,600	3,055	145	20	3,077	16,304	2,470	4,996	12,644	32,337	33,555	7,644	63,787	9,749	7
444	52	3	-		16,304	2,470	4,996	12,644	32,337	33,555	7,644	63,787	9,749	8
15,506	1,576	55	8											9
1,691,158	269,144	2,235	326	38,444	238,198	27,233	55,644	149,939	1,278,654	406,322	50,099	1,557,051	178,024	10
61,206	8,372	482	26	3,176	18,017	2,545	5,567	13,089	52,660	19,362	3,630	66,492	9,160	11
7,578	915	23	9	533	3,642	442	862	2,938	7,389	2,777	300	10,082	384	12
1,313,954	228,183	956	162	23,375	152,971	15,561	30,401	87,395	1,051,024	323,512	35,664	1,263,073	147,127	13
308,420	31,674	774	129	11,360	63,568	8,685	18,814	46,517	167,581	60,671	10,505	217,404	21,353	14
35,008	4,206	200	28	2,035	10,891	1,597	2,792	7,881	23,917	11,454	1,568	34,136	2,803	15
13,654	685	49	6	585	3,266	18,473	18,952	18,453	18,798	5,155	250	18,151	704	16
21,354	738	13	5	276	1,360	245	391	1,202	1,609	954	61	2,535	89	17
		9	2	129	1,055	(18)	(18)	(18)	(18)	868	10	(18)	180	18
	2,783	129	15	1,045	5,210	879	1,449	4,226	12,510	4,477	1,247	16,404	1,830	19
19,256,74	4,716	201	13	1,220	6,261	991	1,982	4,962	15,879	9,002	1,632	19,911	6,602	20
(19)	1,240	65	3	265	1,479	228	493	1,178	7,067	3,621	402	6,507	4,831	21
-	334	10	-	24	140		2			461	2		215	22
19,256,74	3,142	126	10	931	4,642	763	1,489	3,784	8,812	4,920	1,228	13,404	1,556	23
1,562,309	225,801	1,658	266	33,792	211,773	23,474	48,097	130,038	1,225,488	372,490	44,557	1,480,235	162,300	24
41,049	5,779	247	13	1,778	9,496	1,393	2,896	6,535	30,009	7,774	2,452	37,618	2,617	25
1,265,656	194,912	916	158	23,106	150,513	15,453	30,163	86,618	1,054,158	314,969	34,743	1,261,450	142,420	26
255,604	25,110	495	95	8,908	51,764	6,628	15,038	36,885	141,321	49,747	7,362	181,167	17,263	27
61,575	33,901	156	11	976	7,549	804	2,027	5,632	8,820	12,043	1,674	16,922	5,615	28
6,395	677	121	4	548	3,776	493	1,310	5,448	2,812	526	7,778	1,008	29	29
5,894	906	10	4	257	2,282	197	471	1,736	5,780	1,823	239	7,547	295	30
47,995	32,199	21	2	116	1,263	66	154	559	(16)	7,214	909	1,015	4,312	31
1,291	119	4	1	55	228	48	92	196	388	194	-	582	-	32
6,592	520	20	8	20,421	201,724	20,367	20,746	201,426	204,550	201,333	20,668	205,847	20,704	33

¹¹Except for number of establishments, includes figures for the Louisiana operations of one service establishment primarily engaged in metal mining services in other States.

¹²For 1958, except for number of establishments, includes data for one establishment classified in manufactures.

¹³For 1958, except for number of establishments, includes data for four establishments classified in manufactures.

¹⁴Includes figures for one Bituminous Coal and four Oil and Gas Extraction establishments, each with less than 20 employees.

¹⁵Includes figures for two Bituminous Coal mining establishments.

¹⁶Not shown since the cost of supplies, purchases for resales, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery installed exceeds the sum of the value of shipments and receipts and capital expenditures.

¹⁷Figures for Nonmetallic Minerals Mining are included with those for Metal Mining.

¹⁸Figures for Oil and Gas Extraction are combined with those for Metal Mining.

¹⁹Figures for Metal Mining are included with those for Nonmetallic Minerals Mining.

²⁰Except for number of establishments, includes figures for the Hawaii operations of one service establishment primarily engaged in Metal Mining services in Nevada.



U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233

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OFFICIAL BUSINESS

1963 CENSUS OF MINERAL INDUSTRIES



MIC63 (P)-3

SUMMARY SERIES

preliminary report

Size of Establishments in Industry Groups and Industries

This report presents preliminary results from the 1963 Census of Mineral Industries. Figures are shown for the United States, by industry and size of establishment, for all of the five major groups of mining industries and for most of the 50 industries included in the Standard Industrial Classification (SIC) system.

The figures presented in this report have been subjected to only a preliminary review and should be regarded as tentative approximations of the final census figures. Some of the industry totals have been withheld to permit additional checking; these totals will appear in the individual industry reports to be released at a later date. No adjustments in the dollar figures have been made for changes in price levels between the two census years, 1958 and 1963.

The 1963 Census of Mineral Industries is the 15th such census of the United States, beginning in 1840. For 1963, it was conducted jointly with the censuses of business (wholesale, retail, and services), and manufactures. Present legislation (Title 13 of the United States Code) provides for a census of mineral industries every 5 years and, as recently amended, to cover years ending with "2" and "7." Thus, the next minerals census will be conducted in the year 1968, covering mining activity in 1967.

INDUSTRY CLASSIFICATION

In the census of mineral industries, figures are collected from each establishment primarily engaged in the extraction of minerals occurring

naturally. This census includes establishments primarily engaged in exploration and development of mineral properties and contract service establishments primarily engaged in work for others on mineral properties. In general, crushing, screening, washing, concentrating, and other preparation operations needed to render the material marketable are included, whether or not the preparation plants are located at the mines served. Smelting of metallic ores, petroleum refining, and production of cement, clay products, and concrete products are excluded and classified in the manufacturing industries.

Mining operations not within the scope of the minerals census are secondary activities at manufacturing or other nonmanufacturing establishments, such as stone quarries at cement, lime, and dimension stone dressing plants; sand and gravel mines at ready-mixed concrete and concrete products plants; clay pits at structural clay products plants and pottery plants; and gypsum mines at gypsum products plants.

Each establishment is classified in a particular industry according to the SIC system on the basis of the value of its principal products. The general statistics (employment, payrolls, cost of materials, value of shipments, etc.) are reported for each establishment as a whole. Therefore, the aggregates for each industry reflect not only the primary production statistics of the establishments classified in that industry but also their production of secondary products and receipts for other activities (principally contract work performed for others). The extent to which estab-

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U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



lishments classified in an industry specialize in producing products regarded as primary to that industry will be shown in reports in the industry series.

The SIC system combines the 50 individual mining industries into 20 industry groups which are, in turn, combined into 5 major industry groups. Each individual industry is designated by a 4-digit code, each industry group by a 3-digit code identical with the first three digits of its component industries, and each major industry group by a 2-digit code identical with the first two digits of its component industry groups.

All reports of the 1963 census are based upon the 1957 edition of the Standard Industrial Classification Manual published by the Bureau of the Budget, as amended by the "Supplement to the 1957 Edition" (1958).

ESTABLISHMENT STATISTICS

In the minerals census, data are obtained for the operations of an entire establishment showing output in terms of quantity and value; operating and development costs; and labor, materials, supplies, and equipment requirements. Mining operations are classified by industry on the basis of the value of the principal mineral produced, or, if there was no production, on the basis of the principal mineral for which exploration or development was in process. For most mineral industries, secondary mineral products are of little statistical importance. The most significant exceptions are for establishments producing complex ores containing copper, lead, zinc, gold, and silver and for wells which produce both oil and gas. A mineral establishment is generally defined as a single physical location where mineral operations are conducted as a unit or are unified by common management or joint handling of some part of the mining or preparation process. For oil and gas field operations, only one report was required for all oil and gas field operations of a company for each State, except that district reports were obtained for Louisiana, Texas, and New Mexico. For mineral services, which frequently operate over a wide geographic area, only one report was usually required for all such operations in the United States.

A separate report is obtained for each establishment with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Firms operating more than one establishment are required to submit a separate report for each separate location. Also, companies engaged in distinctly different lines of activity at one location submit separate reports if the company records permit such a separation and if the company activities are substantial in size.

Number of employees.--This item includes all production, development, and related workers and all nonproduction personnel at an establishment, including force account construction workers. Employment at separate administrative offices and auxiliaries serving mineral establishments is also included. The employment figures are an average of reported employment totals for the pay-

roll periods ended nearest the 15th of March, May, August, and November. (For highly seasonal industries, most of those other than oil and gas extraction, an average employment derived from 12 mid-month pay periods will be included in the final reports for the census.)

Value added in mining.--This measure is derived for each mining establishment by subtracting the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery from value of shipments and receipts and capital expenditures.

Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is considered to be the best value measure for comparing the relative economic importance of mining among industries and geographic areas.

"Value of shipments and receipts" used in this calculation includes the shipments of all products of the mining establishment, including shipments to other establishments for preparation, together with receipts for work done for others. "Capital expenditures" includes expenditures for development of mineral properties as well as for new construction and major alterations of preparation plants and other structures and expenditures for new and used machinery and equipment. The "costs" used in this calculation include costs charged to both the current and capital accounts. Both the shipments and cost figures include products bought and resold in the same condition.

1963 CENSUS OF MINERAL INDUSTRIES PUBLICATION PROGRAM

Many of the results of the 1963 Census of Mineral Industries will be issued as preliminary statistics which will subsequently be superseded by final reports.

The general statistics for each industry, shown by geographic region and State, as well as figures on the individual products of the industry will appear in preliminary reports, Series MIC(P)-10A through MIC(P)-14F. These reports are scheduled for publication during the remainder of 1964 and the first half of 1965. More detailed figures for each industry will appear in the final industry reports which will be published during the summer of 1965.

Two other preliminary summary reports will be issued during the first half of 1965, one showing general statistics by industry, and the other showing general statistics by geographic division and State and 2-digit industry within State.

An announcement and order form covering all preliminary reports of the census may be obtained free of charge from the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233, or any field office of the U.S. Department of Commerce.

1963 CENSUS OF MINERAL INDUSTRIES

3

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958

(Data which cannot be shown without disclosing information for individual companies have been combined with figures for other size classes. Unless otherwise specified, a (D) appears in the column where the figure has been omitted and the combined figure is underlined and shown in the size class to the left)

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
	ALL MINERAL INDUSTRIES:¹									
	1963:									
	Number of establishments.....	37,091	31,692	3,433	1,047	619	211	62	24	3
	Number of employees.....	² 612,255	127,864	104,646	71,597	94,050	74,730	43,906	38,560	10,103
	Value added in mining.....\$1,000..	15,592,720	2,859,603	2,302,054	1,813,976	2,788,331	2,436,287	1,610,343	1,610,407	171,719
	1958:									
	Number of establishments.....	36,394	30,346	3,722	1,184	735	250	106	45	6
	Number of employees.....	² 734,029	³ 136,869	³ 112,662	³ 81,254	³ 116,995	86,238	71,246	68,917	20,849
	Value added in mining.....\$1,000..	13,394,864	³ 1,879,679	³ 1,663,972	³ 1,357,185	³ 2,291,961	1,785,545	1,682,650	1,842,374	878,128
10	METAL MINING									
	1963:									
	Number of establishments.....	1,629	1,345	88	50	73	40	19	13	1
	Number of employees.....	² 75,915	3,862	2,745	3,492	10,953	13,986	12,939	<u>23,373</u>	(D)
	Value added in mining.....\$1,000..	1,490,751	51,639	70,385	97,836	250,077	266,680	236,061	<u>518,072</u>	(D)
	1958:									
	Number of establishments.....	2,354	1,967	131	85	98	36	19	17	1
	Number of employees.....	² 93,049	³ 5,210	³ 4,043	³ 6,122	³ 15,899	12,287	13,854	<u>29,773</u>	(D)
	Value added in mining.....\$1,000..	1,192,775	³ 60,152	³ 48,104	³ 116,994	³ 285,736	215,576	168,509	<u>292,256</u>	(D)
101	Iron ores:									
	1963:									
	Number of establishments.....	197	101	24	18	31	15	5	3	-
	Number of employees.....	² 21,907	602	744	1,246	4,595	4,954	8,332	(D)	-
	Value added in mining..\$1,000..	542,404	17,913	24,488	53,707	135,541	111,501	<u>199,254</u>	(D)	-
	1958:									
	Number of establishments.....	246	117	32	25	43	17	7	5	-
	Number of employees.....	² 31,580	551	1,063	1,894	6,659	5,705	5,038	6,978	-
	Value added in mining..\$1,000..	500,226	11,436	19,477	54,097	144,247	145,352	56,330	69,287	-
102	Copper ores:									
	1963:									
	Number of establishments.....	160	120	7	2	5	9	9	7	1
	Number of employees.....	226,032	335	364	(D)	751	3,325	5,909	<u>12,328</u>	(D)
	Value added in mining..\$1,000..	484,387	802	<u>2,405</u>	(D)	12,738	75,598	107,748	<u>285,096</u>	(D)
	1958:									
	Number of establishments.....	157	119	6	3	5	7	7	9	1
	Number of employees.....	227,648	305	182	154	850	2,329	5,204	<u>17,023</u>	(D)
	Value added in mining..\$1,000..	266,401	1,309	2,055	(⁴)	6,796	30,572	58,327	<u>167,523</u>	(D)
103	Lead and zinc ores:									
	1963:									
	Number of establishments.....	212	164	19	5	12	9	2	1	-
	Number of employees.....	² 9,484	552	619	339	1,996	2,904	<u>2,778</u>	(D)	-
	Value added in mining..\$1,000..	89,490	5,135	8,256	3,663	21,151	34,474	<u>16,811</u>	(D)	-
	1958:									
	Number of establishments.....	290	238	17	11	13	8	2	1	-
	Number of employees.....	³ 11,227	789	539	749	2,240	<u>6,910</u>	(D)	(D)	-
	Value added in mining..\$1,000..	³ 73,679	³ 4,195	2,048	8,114	14,638	<u>44,686</u>	(D)	(D)	-
104	Gold and silver ores:									
	1963:									
	Number of establishments.....	479	466	3	3	5	1	-	1	-
	Number of employees.....	4,110	713	93	221	<u>3,083</u>	(D)	-	(D)	-
	Value added in mining..\$1,000..	47,096	3,989	565	4,244	<u>38,298</u>	(D)	-	(D)	-
	1958:									
	Number of establishments.....	477	454	10	8	3	-	1	1	-
	Number of employees.....	4,418	<u>4,418</u>	(D)	(D)	(D)	-	(D)	(D)	-
	Value added in mining..\$1,000..	42,151	<u>42,151</u>	(D)	(D)	(D)	-	(D)	(D)	-
105	Bauxite:									
	1963:									
	Number of establishments.....	18	14	2	-	1	1	-	-	-
	Number of employees.....	554	88	466	-	(D)	(D)	-	-	-
	Value added in mining..\$1,000..	17,484	<u>17,484</u>	(D)	-	(D)	(D)	-	-	-
	1958:									
	Number of establishments.....	29	20	7	-	2	-	-	-	-
	Number of employees.....	705	98	607	-	(D)	-	-	-	-
	Value added in mining..\$1,000..	15,430	1,110	<u>14,320</u>	-	(D)	-	-	-	-

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							1,000-2,499 employees	2,500 or more employees
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees			
10	METAL MINING--Continued										
106	Ferroalloy ores:										
	1963:										
	Number of establishments.....	69	56	7	2	2	1	-	1	-	-
	Number of employees.....	3,190	213	194	2,783	(D)	(D)	-	(D)	-	-
	Value added in mining...\$1,000..	71,416	4,219	2,164	65,032	(D)	(D)	-	(D)	-	-
	1958:										
	Number of establishments.....	297	264	16	9	5	1	1	1	-	-
	Number of employees.....	3,438	3,765	463	638	3,272	(D)	(D)	(D)	(D)	-
	Value added in mining...\$1,000..	374,255	39,104	3,305	10,009	51,857	(D)	(D)	(D)	-	-
1094	Uranium-radium-vanadium ores:										
	1963:										
	Number of establishments.....	339	287	20	18	9	2	3	-	-	-
	Number of employees.....	21,757	945	629	1,274	2,091	(D)	2,105	-	-	-
	Value added in mining...\$1,000..	205,275	13,800	29,245	32,346	54,282	(D)	75,599	-	-	-
	1958:										
	Number of establishments.....	603	542	23	19	16	2	1	-	-	-
	Number of employees.....	3,739	3,561	758	1,360	2,638	1,622	(D)	-	-	-
	Value added in mining...\$1,000..	3174,802	325,978	11,903	26,613	65,815	44,495	(D)	-	-	-
11	ANTHRACITE MINING										
	1963:										
	Number of establishments.....	1,078	980	60	24	7	4	2	1	-	-
	Number of employees.....	11,868	2,834	1,823	1,721	1,172	4,233	(D)	(D)	(D)	-
	Value added in mining...\$1,000..	112,076	19,395	19,245	23,596	14,099	35,741	(D)	(D)	-	-
	1958:										
	Number of establishments.....	1,248	1,089	86	26	31	10	2	4	-	-
	Number of employees.....	22,513	3,146	2,728	1,807	55,876	3,261	(5)	5,389	-	-
	Value added in mining...\$1,000..	164,489	35,677	18,445	13,945	538,855	24,944	(5)	32,623	-	-
1111	Anthracite:										
	1963:										
	Number of establishments.....	1,037	954	52	18	6	4	2	1	-	-
	Number of employees.....	10,876	2,637	1,566	2,440	(D)	4,233	(D)	(D)	(D)	-
	Value added in mining...\$1,000..	101,084	16,475	16,895	21,872	(D)	35,741	(D)	(D)	-	-
	1958:										
	Number of establishments.....	1,163	1,046	59	19	25	8	2	4	-	-
	Number of employees.....	219,712	2,841	1,821	1,335	3,704	4,016	(D)	5,389	-	-
	Value added in mining...\$1,000..	142,198	32,776	12,329	10,494	25,896	28,080	(D)	32,623	-	-
1112	Anthracite mining services:										
	1963:										
	Number of establishments.....	41	26	8	6	1	-	-	-	-	-
	Number of employees.....	992	197	257	338	(D)	-	-	-	-	-
	Value added in mining...\$1,000..	10,992	2,920	2,350	2,722	(D)	-	-	-	-	-
	1958:										
	Number of establishments.....	85	43	27	7	6	2	-	-	-	-
	Number of employees.....	3,101	305	907	472	1,417	(D)	-	-	-	-
	Value added in mining...\$1,000..	22,291	2,901	6,116	3,451	2,823	(D)	-	-	-	-
12	BITUMINOUS COAL AND LIGNITE MINING										
	1963:										
	Number of establishments.....	6,218	5,057	663	208	194	82	13	1	-	-
	Number of employees.....	131,485	25,077	20,012	14,327	30,283	29,348	9,656	(D)	(D)	-
	Value added in mining...\$1,000..	1,623,064	204,947	187,271	202,561	498,930	410,997	118,358	(D)	-	-
	1958:										
	Number of establishments.....	6,940	5,565	707	254	246	121	46	1	-	-
	Number of employees.....	2187,963	30,875	21,478	717,718	39,181	41,585	31,114	(D)	(D)	-
	Value added in mining...\$1,000..	1,615,744	192,038	169,658	7154,428	392,752	407,350	292,736	(D)	-	-
1211	Bituminous coal:										
	1963:										
	Number of establishments.....	6,090	4,944	654	202	194	82	13	1	-	-
	Number of employees.....	2130,197	24,443	19,754	13,931	30,283	29,348	9,656	(D)	(D)	-
	Value added in mining...\$1,000..	1,601,279	197,012	184,050	191,352	498,930	410,997	118,358	(D)	-	-
	1958:										
	Number of establishments.....	6,725	5,379	681	253	244	121	46	1	-	-
	Number of employees.....	2185,933	29,842	20,676	717,718	38,986	41,585	31,114	(D)	(D)	-
	Value added in mining...\$1,000..	1,591,321	181,314	160,945	7154,428	387,766	407,350	292,736	(D)	-	-

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

5

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
12	BITUMINOUS COAL AND LIGNITE MINING--Continued									
1212	Lignite:									
	1963:									
	Number of establishments.....	66	60	3	3	-	-	-	-	-
	Number of employees.....	550	217	333	(D)	-	-	-	-	-
	Value added in mining..\$1,000..	11,759	2,592	<u>2,167</u>	(D)	-	-	-	-	-
	1958:									
	Number of establishments.....	58	50	7	-	1	-	-	-	-
	Number of employees.....	510	134	376	-	(D)	-	-	-	-
	Value added in mining..\$1,000..	9,309	1,346	<u>7,963</u>	-	(D)	-	-	-	-
13	OIL AND GAS EXTRACTION ¹									
	1963:									
	Number of establishments.....	19,997	17,558	1,592	507	249	63	17	9	2
	Number of employees.....	² 275,659	61,789	49,105	34,214	36,955	21,901	12,783	<u>22,263</u>	(D)
	Value added in mining....\$1,000..	10,637,068	2,123,298	1,614,228	1,240,803	1,754,599	1,576,777	1,095,065	<u>1,232,298</u>	(D)
	1958:									
	Number of establishments.....	18,522	15,831	1,754	575	244	59	32	22	5
	Number of employees.....	² 312,916	³ 64,520	³ 53,245	38,581	³ 38,859	³ 19,997	¹⁰ 30,312	33,050	¹⁰ 9,934
	Value added in mining....\$1,000..	9,032,493	³ 1,223,153	³ 1,092,811	887,029	³ 1,339,950	³ 1,006,969	¹⁰ 1,257,873	1,507,221	¹⁰ 720,283
1311	Crude petroleum and natural gas ¹ :									
	1963:									
	Number of establishments.....	13,112	12,164	570	198	120	43	11	6	-
	Number of employees.....	² 150,945	32,648	17,272	13,723	18,648	15,262	7,903	9,985	-
	Value added in mining..\$1,000..	8,503,737	1,616,983	1,054,058	876,192	1,466,633	1,457,332	1,025,561	1,026,978	-
	1958:									
	Number of establishments.....	12,010	10,917	639	234	133	45	23	16	3
	Number of employees.....	² 180,121	³ 34,045	³ 19,062	16,153	21,462	15,976	15,886	24,479	9,934
	Value added in mining..\$1,000..	³ 7,339,922	³ 908,040	³ 631,159	547,810	1,101,838	950,782	1,050,528	1,429,482	720,283
	Crude petroleum subindustry ¹ :									
	1963:									
	Number of establishments.....	11,280	10,491	469	166	99	41	8	6	-
	Number of employees.....	² 133,355	28,574	14,169	11,451	<u>29,732</u>	(D)	5,776	9,985	-
	Value added in mining.....\$1,000..	7,385,639	1,234,175	789,056	719,459	<u>2,655,892</u>	(D)	960,079	1,026,978	-
	1958:									
	Number of establishments.....	10,620	9,645	581	202	117	36	21	15	3
	Number of employees.....	164,804	³ 30,640	³ 17,274	14,018	19,151	13,116	<u>38,001</u>	(D)	9,934
	Value added in mining.....\$1,000..	³ 6,823,328	³ 800,909	³ 564,413	452,602	983,324	873,742	<u>2,428,055</u>	(D)	720,283
	Natural gas subindustry ¹ :									
	1963:									
	Number of establishments.....	1,832	1,673	101	32	21	2	3	-	-
	Number of employees.....	² 16,990	4,074	3,103	2,272	<u>4,172</u>	(D)	2,127	-	-
	Value added in mining.....\$1,000..	1,118,098	382,808	245,002	156,733	<u>268,072</u>	(D)	65,482	-	-
	1958:									
	Number of establishments.....	1,390	1,272	58	32	16	9	2	1	-
	Number of employees.....	² 15,317	3,405	1,788	2,135	2,311	2,860	<u>2,364</u>	(D)	-
	Value added in mining.....\$1,000..	516,594	107,131	66,746	95,208	118,514	77,040	<u>51,955</u>	(D)	-
1321	Natural gas liquids:									
	1963:									
	Number of establishments.....	639	393	184	47	14	1	-	-	-
	Number of employees.....	² 13,898	3,372	5,589	2,806	<u>1,968</u>	(D)	-	-	-
	Value added in mining..\$1,000..	795,667	211,965	306,104	166,351	<u>111,247</u>	(D)	-	-	-
	1958:									
	Number of establishments.....	593	303	213	64	13	-	-	-	-
	Number of employees.....	² 16,514	2,748	6,683	4,036	2,073	-	-	-	-
	Value added in mining..\$1,000..	587,580	94,131	231,436	159,376	102,637	-	-	-	-
1381	Drilling oil and gas wells services:									
	1963:									
	Number of establishments.....	2,829	2,086	485	173	73	11	1	-	-
	Number of employees.....	² 51,433	11,714	15,189	11,757	10,444	5,020	(D)	-	-
	Value added in mining..\$1,000..	685,210	137,577	173,945	149,114	137,588	<u>86,936</u>	(D)	-	-
	1958:									
	Number of establishments.....	3,066	2,245	558	192	58	9	3	1	-
	Number of employees.....	² 59,411	15,386	17,030	12,782	8,345	2,871	<u>2,835</u>	(D)	-
	Value added in mining..\$1,000..	³ 587,440	124,195	155,050	137,315	85,259	42,565	<u>43,036</u>	(D)	-

See footnotes at end of table.

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
13	OIL AND GAS EXTRACTION--Continued									
1382	Oil and gas field exploration services:									
	1963:									
	Number of establishments.....	386	318	33	13	16	4	2	-	-
	Number of employees.....	² 8,881	1,206	1,025	815	2,489	<u>3,080</u>	(D)	-	-
	Value added in mining...\$1,000..	96,051	14,878	9,890	6,632	22,854	<u>41,817</u>	(D)	-	-
	1958:									
	Number of establishments.....	² 348	272	37	20	14	2	2	1	-
	Number of employees.....	² 9,557	1,466	1,218	1,294	<u>3,002</u>	(D)	<u>2,452</u>	(D)	-
	Value added in mining...\$1,000..	² 64,355	13,463	9,106	10,329	<u>20,016</u>	(D)	<u>11,459</u>	(D)	-
1389	Oil and gas field services, nec:									
	1963:									
	Number of establishments.....	3,031	2,597	320	76	26	4	3	3	2
	Number of employees.....	² 47,502	12,849	10,030	5,113	<u>4,977</u>	(D)	1,848	<u>12,278</u>	(D)
	Value added in mining...\$1,000..	556,403	141,895	90,231	42,514	<u>51,314</u>	(D)	25,129	<u>205,320</u>	(D)
	1958:									
	Number of establishments.....	2,505	2,094	307	65	26	3	4	4	2
	Number of employees.....	³ 47,278	10,875	9,250	4,316	3,977	1,150	2,954	<u>14,756</u>	(D)
	Value added in mining...\$1,000..	³ 455,994	83,324	66,060	32,199	30,200	13,622	32,846	<u>197,743</u>	(D)
	Survey, log, cement services subindustry:									
	1963:									
	Number of establishments.....	249	219	20	3	4	-	1	-	2
	Number of employees.....	10,643	1,120	564	<u>8,959</u>	(D)	-	(D)	-	(D)
	Value added in mining...\$1,000..	200,123	16,736	7,840	<u>175,547</u>	(D)	-	(D)	-	(D)
	1958:									
	Number of establishments.....	199	166	19	8	2	2	-	-	2
	Number of employees.....	12,081	816	629	<u>10,636</u>	(D)	(D)	-	-	(D)
	Value added in mining...\$1,000..	167,391	8,704	5,999	<u>152,688</u>	(D)	(D)	-	-	(D)
	Miscellaneous oil and gas field services subindustry:									
	1963:									
	Number of establishments.....	2,782	2,378	300	73	22	4	2	3	-
	Number of employees.....	² 36,859	11,729	9,466	<u>15,257</u>	(D)	(D)	(D)	(D)	-
	Value added in mining...\$1,000..	343,171	125,159	82,391	<u>135,621</u>	(D)	(D)	(D)	(D)	-
	1958:									
	Number of establishments.....	2,306	1,928	288	57	24	1	4	4	-
	Number of employees.....	³ 35,197	³ 10,059	8,621	<u>13,563</u>	(D)	(D)	<u>2,954</u>	(D)	-
	Value added in mining...\$1,000..	³ 288,603	³ 74,620	60,061	<u>121,076</u>	(D)	(D)	<u>32,846</u>	(D)	-
14	NONMETALLIC MINERALS MINING									
	1963:									
	Number of establishments.....	8,169	6,752	1,030	258	96	22	11	-	-
	Number of employees.....	² 117,328	34,302	30,961	17,843	14,602	8,107	8,710	-	-
	Value added in mining...\$1,000..	1,729,761	460,324	410,925	249,180	270,626	165,061	173,645	-	-
	1958:									
	Number of establishments.....	7,330	5,894	1,044	244	116	24	7	1	-
	Number of employees.....	² 117,288	¹¹ 33,333	³ 31,168	¹¹ 16,850	¹² 19,604	¹² 7,925	<u>6,303</u>	(D)	-
	Value added in mining...\$1,000..	1,389,363	¹¹ 370,308	³ 334,954	¹¹ 183,209	¹² 244,864	¹² 126,441	<u>124,649</u>	(D)	-
1411	Dimension stone:									
	1963:									
	Number of establishments.....	346	308	36	1	1	-	-	-	-
	Number of employees.....	2,602	1,372	<u>1,230</u>	(D)	(D)	-	-	-	-
	Value added in mining...\$1,000..	21,577	10,665	<u>10,912</u>	(D)	(D)	-	-	-	-
	1958:									
	Number of establishments.....	335	309	22	2	2	-	-	-	-
	Number of employees.....	² 2,306	1,297	632	<u>348</u>	(D)	-	-	-	-
	Value added in mining...\$1,000..	13,076	7,250	3,858	<u>1,968</u>	(D)	-	-	-	-
1421	Crushed and broken stone:									
	1963:									
	Number of establishments.....	2,192	1,557	469	126	35	4	1	-	-
	Number of employees.....	² 41,468	11,056	14,044	8,559	5,033	<u>1,751</u>	(D)	-	-
	Value added in mining...\$1,000..	570,268	147,373	187,598	120,730	93,455	<u>21,112</u>	(D)	-	-
	1958:									
	Number of establishments.....	1,970	1,319	494	115	36	5	1	-	-
	Number of employees.....	² 41,730	³ 10,378	³ 14,441	⁸ 7,856	5,414	<u>2,240</u>	(D)	-	-
	Value added in mining...\$1,000..	¹³ 49,419	³ 105,470	³ 157,472	³ 87,403	73,153	<u>22,290</u>	(D)	-	-

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

7

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
14	NONMETALLIC MINERALS MINING-- Continued									
1421	Crushed and broken stone-- Continued									
	Crushed and broken limestone subindustry:									
	1963:									
	Number of establishments.....	1,516	1,069	336	88	19	3	1	-	-
	Number of employees.....	² 28,865	8,134	9,933	5,864	<u>4,202</u>	(D)	(D)	-	-
	Value added in mining.....\$1,000..	382,874	106,903	127,623	81,641	<u>66,707</u>	(D)	(D)	-	-
	1958:									
	Number of establishments.....	1,463	976	375	81	26	4	1	-	-
	Number of employees.....	² 31,507	³ 8,141	³ 11,038	³ 5,676	<u>5,782</u>	(D)	(D)	-	-
	Value added in mining.....\$1,000..	334,803	³ 79,316	³ 116,980	³ 66,704	<u>71,368</u>	(D)	(D)	-	-
	Crushed and broken granite subindustry:									
	1963:									
	Number of establishments.....	161	94	46	18	3	-	-	-	-
	Number of employees.....	3,700	592	1,475	1,294	339	-	-	-	-
	Value added in mining.....\$1,000..	53,568	8,577	24,018	16,859	4,114	-	-	-	-
	1958:									
	Number of establishments.....	122	61	43	15	3	-	-	-	-
	Number of employees.....	² 13,309	¹³ 440	1,306	1,073	420	-	-	-	-
	Value added in mining.....\$1,000..	² 13,33,493	¹³ 5,161	15,338	8,787	4,207	-	-	-	-
	Crushed and broken stone, nec, subindustry:									
	1963:									
	Number of establishments.....	515	394	87	20	13	1	-	-	-
	Number of employees.....	² 8,903	2,332	2,636	1,401	<u>2,243</u>	(D)	-	-	-
	Value added in mining.....\$1,000..	133,826	31,893	35,957	22,230	<u>43,746</u>	(D)	-	-	-
	1958:									
	Number of establishments.....	385	282	76	19	7	1	-	-	-
	Number of employees.....	² 6,914	³ 1,797	³ 2,097	³ 1,107	<u>1,452</u>	(D)	-	-	-
	Value added in mining.....\$1,000..	81,123	³ 20,993	³ 25,154	³ 11,912	<u>19,868</u>	(D)	-	-	-
1441	Sand and gravel:									
	1963:									
	Number of establishments.....	4,454	3,991	381	64	16	2	-	-	-
	Number of employees.....	² 37,133	17,946	11,304	4,242	<u>2,716</u>	(D)	-	-	-
	Value added in mining..\$1,000..	500,202	250,055	154,462	59,455	<u>36,230</u>	(D)	-	-	-
	1958:									
	Number of establishments.....	3,708	3,224	396	62	25	1	-	-	-
	Number of employees.....	³ 7,159	³ 16,883	³ 11,976	³ 4,278	<u>3,911</u>	(D)	-	-	-
	Value added in mining..\$1,000..	435,439	³ 208,121	³ 124,880	³ 48,227	<u>52,240</u>	(D)	-	-	-
1452	Bentonite:									
	1963:									
	Number of establishments.....	43	25	15	3	-	-	-	-	-
	Number of employees.....	897	194	703	(D)	-	-	-	-	-
	Value added in mining..\$1,000..	11,670	2,710	<u>8,960</u>	(D)	-	-	-	-	-
	1958:									
	Number of establishments.....	41	26	12	3	-	-	-	-	-
	Number of employees.....	688	193	495	(D)	-	-	-	-	-
	Value added in mining..\$1,000..	12,220	1,981	<u>10,239</u>	(D)	-	-	-	-	-
1454	Fuller's earth:									
	1963:									
	Number of establishments.....	14	6	3	3	1	1	-	-	-
	Number of employees.....	747	24	88	635	(D)	(D)	-	-	-
	Value added in mining..\$1,000..	8,993	245	918	<u>7,350</u>	(D)	(D)	-	-	-
	1958:									
	Number of establishments.....	14	8	4	-	1	1	-	-	-
	Number of employees.....	652	69	<u>283</u>	-	(D)	(D)	-	-	-
	Value added in mining..\$1,000..	5,955	<u>950</u>	<u>2,005</u>	-	(D)	(D)	-	-	-
1455	Kaolin and ball clay:									
	1963:									
	Number of establishments.....	42	16	14	5	3	3	1	-	-
	Number of employees.....	² 3,999	139	444	354	435	<u>1,772</u>	(D)	-	-
	Value added in mining..\$1,000..	48,137	1,885	5,763	6,913	4,984	<u>28,532</u>	(D)	-	-
	1958:									
	Number of establishments.....	53	27	12	5	5	4	-	-	-
	Number of employees.....	3,394	225	447	458	688	1,576	-	-	-
	Value added in mining..\$1,000..	30,990	3,271	4,277	3,644	5,005	14,793	-	-	-

See footnotes at end of table.

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
14	NONMETALLIC MINERALS MINING-- Continued									
1473	Fluorspar:									
	1963:									
	Number of establishments.....	30	23	3	2	2	-	-	-	-
	Number of employees.....	788	123	105	560	(D)	-	-	-	-
	Value added in mining..\$1,000..	8,829	1,726	1,254	<u>5,849</u>	(D)	-	-	-	-
	1958:									
	Number of establishments.....	55	44	3	5	2	1	-	-	-
	Number of employees.....	1,235	226	69	366	574	(D)	-	-	-
	Value added in mining..\$1,000..	12,653	2,564	1,994	3,682	<u>4,413</u>	(D)	-	-	-
1474	Potash, soda, borate minerals:									
	1963:									
	Number of establishments.....	27	11	1	4	2	4	5	-	-
	Number of employees.....	6,790	18	632	(D)	(D)	1,585	4,548	-	-
	Value added in mining..\$1,000..	156,291	99	<u>12,869</u>	(D)	(D)	48,785	94,538	-	-
	1958:									
	Number of establishments.....	21	7	2	2	1	4	4	1	-
	Number of employees.....	26,661	90	(D)	361	(D)	1,257	4,428	(D)	-
	Value added in mining..\$1,000..	111,082	<u>1,752</u>	(D)	<u>6,318</u>	(D)	27,587	<u>75,324</u>	(D)	-
1475	Phosphate rock:									
	1963:									
	Number of establishments.....	61	26	9	12	9	4	1	-	-
	Number of employees.....	5,419	146	279	981	1,198	2,815	(D)	-	-
	Value added in mining..\$1,000..	93,813	4,077	3,973	20,931	29,757	<u>35,075</u>	(D)	-	-
	1958:									
	Number of establishments.....	65	28	8	12	15	1	1	-	-
	Number of employees.....	5,393	201	258	934	4,000	(D)	(D)	-	-
	Value added in mining..\$1,000..	64,375	1,817	4,028	12,087	<u>46,443</u>	(D)	(D)	-	-
1476	Rock salt:									
	1963:									
	Number of establishments.....	24	8	4	4	6	2	-	-	-
	Number of employees.....	2,494	33	152	356	<u>1,959</u>	(D)	-	-	-
	Value added in mining..\$1,000..	50,114	296	3,420	3,730	<u>42,668</u>	(D)	-	-	-
	1958:									
	Number of establishments.....	22	10	2	4	3	3	-	-	-
	Number of employees.....	1,984	16	322	(D)	<u>1,569</u>	(D)	-	-	-
	Value added in mining..\$1,000..	34,073	100	<u>4,319</u>	(D)	<u>29,654</u>	(D)	-	-	-
1477	Sulfur:									
	1963:									
	Number of establishments.....	17	7	-	1	7	1	1	-	-
	Number of employees.....	2,603	<u>111</u>	-	(D)	<u>2,492</u>	(D)	(D)	-	-
	Value added in mining..\$1,000..	100,349	<u>100,349</u>	-	(D)	(D)	(D)	(D)	-	-
	1958:									
	Number of establishments.....	24	11	-	2	9	1	1	-	-
	Number of employees.....	3,677	163	-	(D)	<u>3,514</u>	(D)	(D)	-	-
	Value added in mining..\$1,000..	94,063	<u>1,060</u>	-	(D)	<u>93,003</u>	(D)	(D)	-	-
1481	Nonmetallic minerals services:									
	1963:									
	Number of establishments.....	108	98	6	3	1	-	-	-	-
	Number of employees.....	813	341	174	228	(D)	-	-	-	-
	Value added in mining..\$1,000..	8,071	3,663	1,600	<u>2,808</u>	(D)	-	-	-	-
	1958:									
	Number of establishments.....	75	69	3	1	1	1	-	-	-
	Number of employees.....	1,109	392	<u>717</u>	(D)	(D)	(D)	-	-	-
	Value added in mining..\$1,000..	6,217	3,562	<u>2,655</u>	(D)	(D)	(D)	-	-	-
1496	Talc, soapstone, pyrophyllite:									
	1963:									
	Number of establishments.....	67	58	2	4	2	1	-	-	-
	Number of employees.....	1,241	<u>340</u>	(D)	244	<u>657</u>	(D)	-	-	-
	Value added in mining..\$1,000..	13,410	<u>4,027</u>	(D)	2,213	<u>7,170</u>	(D)	-	-	-
	1958:									
	Number of establishments.....	64	52	7	2	2	1	-	-	-
	Number of employees.....	1,294	194	246	854	(D)	(D)	-	-	-
	Value added in mining..\$1,000..	11,755	2,014	1,964	<u>7,777</u>	(D)	(D)	-	-	-
1497	Natural abrasives, except sand:									
	1963:									
	Number of establishments.....	17	13	3	-	1	-	-	-	-
	Number of employees.....	270	77	<u>195</u>	-	(D)	-	-	-	-
	Value added in mining..\$1,000..	4,018	688	<u>3,330</u>	-	(D)	-	-	-	-
	1958:									
	Number of establishments.....	20	16	3	-	1	-	-	-	-
	Number of employees.....	229	55	174	-	(D)	-	-	-	-
	Value added in mining..\$1,000..	2,648	658	<u>1,990</u>	-	(D)	-	-	-	-

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

9

SELECTED STATISTICS FOR MINERAL ESTABLISHMENTS CLASSIFIED BY EMPLOYMENT SIZE: 1963 AND 1958--Continued

Code	Industry, year, and item	All establishments, total	Establishments with an average of--							
			0-19 employees	20-49 employees	50-99 employees	100-249 employees	250-499 employees	500-999 employees	1,000-2,499 employees	2,500 or more employees
14	NONMETALLIC MINERALS MINING-- Continued									
1498	Peat:									
	1963:									
	Number of establishments.....	109	105	2	2	-	-	-	-	-
	Number of employees.....	504	504	(D)	(D)	-	-	-	-	-
	Value added in mining..\$1,000..	6,479	6,479	(D)	(D)	-	-	-	-	-
	1958:									
	Number of establishments.....	81	78	2	1	-	-	-	-	-
	Number of employees.....	389	234	155	(D)	-	-	-	-	-
	Value added in mining..\$1,000..	3,640	1,897	1,743	(D)	-	-	-	-	-

- Represents zero.

¹For Industry 1311, Crude Petroleum and Natural Gas, size of establishment figures for 1963 and 1958 are not entirely comparable, since in 1963 companies were asked to make separate reports by districts for the States of Louisiana, Texas, and New Mexico. The preliminary 1963 figures for this industry in these three States are: Number of establishments, 5,587 of which 438 had 20 or more employees; employment, 75,421; and value added in mining, \$5,417 million. For 1958 the figures for the same industry in these States were: Number of establishments, 4,068, of which 445 had 20 or more employees; employment, 91,806; and value added in mining, \$4,375 million.

²Includes figures for some separately reported central offices and related facilities. These were not distributed by employment size.

³Excludes figures for establishments in Alaska and Hawaii.

⁴Not shown since the cost of supplies, minerals received for preparation, fuels, purchased electricity, contract work, and purchased machinery installed exceeded the sum of value of shipments and receipts and capital expenditures.

⁵Figures for 2 establishments in Industry 1111, Anthracite with "500-999 employees" are combined with those for establishments with "100-249 employees."

⁶Includes data for 2 establishments in Industry 1213, Coal Mining Services, Except Anthracite, one with "20-49 employees" and one with "100-249 employees." See also footnote 3.

⁷Excludes data for one establishment in Industry 1213, Coal Mining Services, Except Anthracite, with "20-49 employees." See also footnote 3.

⁸Figures include a net adjustment for 3 smaller establishments to compensate for the inclusions and exclusions described in footnotes 6 and 7.

⁹Figures for "250-499 employees" exclude and those for "100-249 employees" include data for 2 establishments in Industry 1322, Oil and Gas Field Exploration Services."

¹⁰Figures for "2,500 employees and over" exclude and those for "500-999 employees" include data for 2 establishments in Industry 1389, Oil and Gas Field Services, nec.

¹¹Figures for "50-99 employees" exclude and those for "0-19 employees" include data for one establishment in Industry 1456, Feldspar. See also footnote 3.

¹²Figures for "250-499 employees" exclude and those for "100-249 employees" include data for one establishment in Industry 1481, Nonmetallic Mining Services.

¹³Excludes data for one crushed and broken granite establishment with no employees.

U.S. DEPARTMENT OF COMMERCE

FIELD OFFICES

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Albuquerque, N. Mex. 87101

Room 306
Loussac-Sogn Building
Anchorage, Alaska 99501

4th Fl., Home Savings Bldg.
75 Forsyth Street, N.W.
Atlanta, Ga. 30303

Room 305, U.S. Customhouse
Gay and Lombard Streets
Baltimore, Md. 21202

Title Building
2030 Third Avenue, North
Birmingham, Ala. 35203

Room 230
80 Federal Street
Boston, Mass. 02110

504 Federal Building
117 Ellicott Street
Buffalo, N.Y. 14203

No. 4 North Atlantic Wharf
Charleston, S. C. 29401

3002 New Federal Office Bldg.
500 Quarrier Street
Charleston, W. Va. 25301

207 Majestic Building
16th and Capitol Avenue
Cheyenne, Wyo. 82001

1486 New Federal Bldg.
219 South Dearborn St.
Chicago, Ill. 60604

8028 Federal Office Bldg.
550 Main Street
Cincinnati, Ohio 45202

4th Fl., Fed. Reserve Bank Bldg.
East 6th St. and Superior Ave.
Cleveland, Ohio 44101

Room 1200
1114 Commerce Street
Dallas, Tex. 75202

142 New Custom House
19th and Stout Street
Denver, Colo. 80202

Room 1216, Paramount Bldg.
509 Grand Avenue
Des Moines, Iowa 50309

445 Federal Building
Detroit, Mich. 48226

Room 412
U. S. Post Office Bldg.
Greensboro, N.C. 27402

18 Asylum Street
Hartford, Conn. 06103

202 International Savings Bldg.
1022 Bethel Street
Honolulu, Hawaii 96813

5102 Federal Building
515 Rusk Avenue
Houston, Tex. 77002

512 Greenleaf Bldg.
208 Laura Street
Jacksonville, Fla. 32202

Room 2011, 911 Walnut Street
Kansas City, Mo. 64106

Room 450, Western Pacific Bldg.
1031 South Broadway
Los Angeles, Calif. 90015

345 Federal Office Building
167 N. Main Street
Memphis, Tenn. 38103

1628 Federal Office Bldg.
51 S.W. First Avenue
Miami, Fla., 33130

Straus Building
238 W. Wisconsin Avenue
Milwaukee, Wis. 53203

Room 304, Federal Building
110 South Fourth Street
Minneapolis, Minn. 55401

1508 Masonic Temple Building
333 St. Charles Avenue
New Orleans, La. 70130

61st Fl., Empire State Bldg.
350 Fifth Avenue
New York, N.Y. 10001

Jefferson Building
1015 Chestnut Street
Philadelphia, Pa. 19107

New Federal Building
230 North First Avenue
Phoenix, Ariz. 85025

1030 Park Building
355 Fifth Avenue
Pittsburgh, Pa. 15222

217 Old U.S. Courthouse
520 S.W. Morrison Street
Portland, Oreg. 97204

1479 Wells Avenue
Reno, Nev. 89502

2105 Federal Building
400 North 8th Street
Richmond, Va. 23240

2511 Federal Building
1520 Market Street
St. Louis, Mo. 63103

3235 Federal Building
125 S. State Street
Salt Lake City, Utah 84111

Federal Building--Box 36013
450 Golden Gate Avenue
San Francisco, Calif. 94102

Room 628, 605 Condado Ave.
Santurce, P.R. 00907

235 U.S. Courthouse and
Post Office Building
125-29 Bull Street
Savannah, Ga. 31402

809 Federal Office Building
909 First Avenue
Seattle, Wash. 98104



U.S. DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON, D.C. 20233

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL BUSINESS

1963 CENSUS OF MINERAL INDUSTRIES



MIC63(P)-4

SUBJECT SERIES

preliminary
report

Water Use in Mineral Industries

This preliminary report on water use is based on information obtained in the 1963 Census of Mineral Industries. In these industries, water data were reported for about 17,000 establishments out of the approximately 38,000 establishments included in the census. Information on water use was obtained for establishments reported on the census long forms, which include, in general, all establishments with more than 4 employees.

The number of establishments for which water use was obtained is shown by industry in table 1. It indicates that of the approximately 17,000 establishments for which water use was shown, only 2,300 used utility water as their principal source of water, except mine water, while 11,500 specified that their principal source was not a utility. Of the 17,000 establishments about 1,000 used 100 million gallons or more of water per year and another 1,000 reported using from 20 through 99 million gallons. Table 2 shows the distribution of these same data by State. Of establishments using over 100 million gallons, about 170 were in the East North Central States, 125 in the South Atlantic, and 240 in the West South Central.

Information on industrial water use was first collected and published for all mineral industries in the 1954 Census of Mineral Industries. At that time, more detailed information on the use of water by mining establishments was obtained. Some such information has since been collected by the Bureau of Mines, U.S. Department of the Interior, for the years 1959 and 1962. The present statistics are intended to furnish a benchmark indicative of the number of water users and the size and kind of their consumption rather than to provide a measure of total water use by the mineral industries.

DEFINITIONS

Source of water used referred to as "utility" represents all publicly or privately operated systems whose primary purpose is the supplying of water to the general public. "Other than utility" refers to all other sources of water (except mine water) such as company water systems and joint company water systems, whether their source is surface or ground water. Water use data include both fresh and brackish water, including mine water.

1963 CENSUS OF MINERAL INDUSTRIES PUBLICATION PROGRAM

Various preliminary industry and summary reports have been issued during the last quarter of 1964 and the first half of 1965. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next minerals census will be conducted in 1968 covering mining activity in 1967.

August 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



Table 1.—WATER USE IN THE MINERAL INDUSTRIES, BY INDUSTRY: 1963

Ind. code	Industry group and industry	Number of mineral establishments reporting water use								
		Total	By principal source of water ¹			By quantity of water intake ² (millions of gallons)				
			Utility	Other than utility	Source not specified	Under 1	1-9	10-19	20-99	100 and over
	All mineral industries.....	17,107	2,258	11,473	3,376	13,328	1,300	448	1,011	1,020
10	Metal mining.....	676	112	386	178	414	44	21	54	143
1011	Iron ores.....	144	43	87	14	55	12	6	19	52
1021	Copper ores.....	85	11	48	26	43	7	3	5	27
1031	Lead and zinc ores.....	93	13	52	28	41	4	5	13	30
	Lead ores.....	33	4	24	5	20	2	-	1	10
	Zinc ores.....	60	9	28	23	21	2	5	12	20
104	Gold and silver ores.....	82	10	41	31	62	9	-	2	9
1042	Lode gold..	43	6	19	18	38	2	-	1	2
1043	Placer gold.	14	1	7	6	6	5	-	1	2
1044	Silver ores.....	25	3	15	7	18	2	-	-	5
1051	Bauxite.....	14	1	5	8	12	1	-	1	-
106	Ferroalloy ores.....	28	8	9	11	20	2	-	3	3
1062	Manganese ores.....	11	5	2	4	8	1	-	1	1
1064 and 1069	Tungsten ores and ferroalloy ores, n.e.c.....	17	3	7	7	12	1	-	2	2
1081	Metal mining services.....	54	5	29	20	52	2	-	-	-
109	Miscellaneous metal ores.....	176	21	115	40	129	7	7	11	22
1092	Mercury ores.....	8	1	3	4	6	-	1	-	1
1093	Titanium ores.....	7	-	7	-	1	-	1	-	5
1094	Uranium-radium-vanadium ores.....	154	18	100	36	118	5	5	11	15
1099	Metallic ores, n.e.c.....	7	2	5	-	4	2	-	-	1
11	Anthracite mining.....	258	59	127	72	191	18	10	13	26
1111	Anthracite.....	241	57	119	65	176	16	10	13	26
1112	Anthracite mining services.....	17	2	8	7	15	2	-	-	-
12	Bituminous coal and lignite mining.....	2,457	194	1,446	817	2,055	130	54	110	108
1211	Bituminous coal.....	2,380	184	1,405	791	1,980	128	54	110	108
1212	Lignite.....	23	4	14	5	21	2	-	-	-
1213	Bituminous coal and lignite mining services..	54	6	27	21	54	-	-	-	-
13	Oil and gas extraction.....	9,697	1,273	6,968	1,456	7,879	708	242	531	337
1311	Crude petroleum and natural gas.....	6,250	634	4,643	973	5,193	389	148	275	245
	Crude petroleum.....	5,265	547	3,907	811	4,272	358	137	263	235
	Natural gas.....	985	87	736	162	921	31	11	12	10
1321	Natural gas liquids.....	628	77	507	44	158	108	64	218	80
138	Oil and gas field services.....	2,819	562	1,818	439	2,528	211	30	38	12
1381	Drilling oil and gas wells.....	1,442	174	1,091	177	1,203	172	25	36	6
1382	Oil and gas exploration services.....	173	39	103	31	157	14	1	-	1
1389	Oil and gas field services, n.e.c.....	1,204	349	624	231	1,168	25	4	2	5
	Well surveying, well logging, and cementing wells.....	115	58	37	20	109	3	-	-	3
	Miscellaneous oil and gas field services..	1,089	291	587	211	1,059	22	4	2	2
14	Nonmetallic minerals mining.....	4,019	620	2,546	853	2,789	400	121	303	406
1411	Dimension stone.....	146	20	69	57	131	10	3	2	-
	Dimension limestone.....	33	2	24	7	27	4	1	1	-
	Dimension granite.....	45	6	23	16	42	2	1	-	-
	Dimension stone, n.e.c.....	68	12	22	34	62	4	1	1	-

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 1.—WATER USE IN THE MINERALS INDUSTRIES, BY INDUSTRY: 1963—Continued

Ind. code	Industry group and industry	Number of mineral establishments reporting water use								
		Total	By principal source of water ¹			By quantity of water intake ² (millions of gallons)				
			Utility	Other than utility	Source not specified	Under 1	1-9	10-19	20-99	100 and over
1421	Crushed and broken stone.....	1,440	222	958	260	1,090	163	44	66	77
	Crushed and broken limestone.....	989	160	651	178	757	107	30	42	53
	Crushed and broken granite.....	115	11	98	6	71	20	3	10	11
	Crushed and broken stone, n.e.c.....	336	51	209	76	262	36	11	14	13
1441	Sand and gravel.....	1,812	274	1,150	388	1,118	195	59	204	236
	Construction sand and gravel.....	1,679	259	1,048	372	1,042	179	55	193	210
	Glass sand.....	38	4	30	4	8	6	3	8	13
	Molding sand.....	53	6	40	7	44	4	1	1	3
	Industrial sand, n.e.c.....	42	5	32	5	24	6	-	2	10
145	Clay and related minerals.....	221	38	135	48	173	14	8	7	19
1452	Bentonite.....	32	11	19	2	26	4	1	1	-
1453	Fire clay.....	45	6	25	14	42	1	1	-	1
1454	Fuller's earth.....	11	3	6	2	6	2	-	1	2
1455	Kaolin and ball clay.....	37	4	28	5	25	4	-	3	5
1456	Feldspar.....	19	3	15	1	13	-	-	1	5
1459	Clay and related minerals, n.e.c.....	77	11	42	24	61	3	6	1	6
147	Chemical and fertilizer minerals.....	143	27	102	14	51	6	5	17	64
1472	Barite.....	30	6	19	5	15	2	-	4	9
1473	Fluorspar.....	14	5	7	2	7	-	1	2	4
1474	Potash, soda, and borate minerals.....	17	1	15	1	4	-	-	2	11
1475	Phosphate rock.....	50	6	39	5	16	1	1	5	27
1476	Rock salt.....	17	5	12	-	7	2	3	3	2
1477	Sulfur.....	11	4	7	-	1	-	-	-	10
1479	Chemical and fertilizer mining, n.e.c.....	4	-	3	1	1	1	-	1	1
1481	Nonmetallic minerals services.....	81	5	39	37	79	1	-	1	-
149	Miscellaneous minerals, n.e.c.....	176	34	93	49	147	11	2	6	10
1492	Gypsum.....	21	8	8	5	20	-	-	1	-
1493	Mica.....	9	1	5	3	5	2	-	-	2
1494	Native asphalt and bitumens.....	12	-	8	4	10	-	1	-	1
1495	Pumice and pumicite.....	17	4	10	3	17	-	-	-	-
1496	Talc, soapstone, and pyrophyllite.....	46	4	36	6	38	4	1	2	1
1497	Natural abrasives.....	8	3	4	1	7	-	-	-	1
1498	Peat.....	26	6	7	13	25	1	-	-	-
1499	Nonmetallic minerals, n.e.c.....	37	8	15	14	25	4	-	3	5

- Represents zero. n.e.c. Not elsewhere classified.

¹Except mine water.²Includes mine water used.

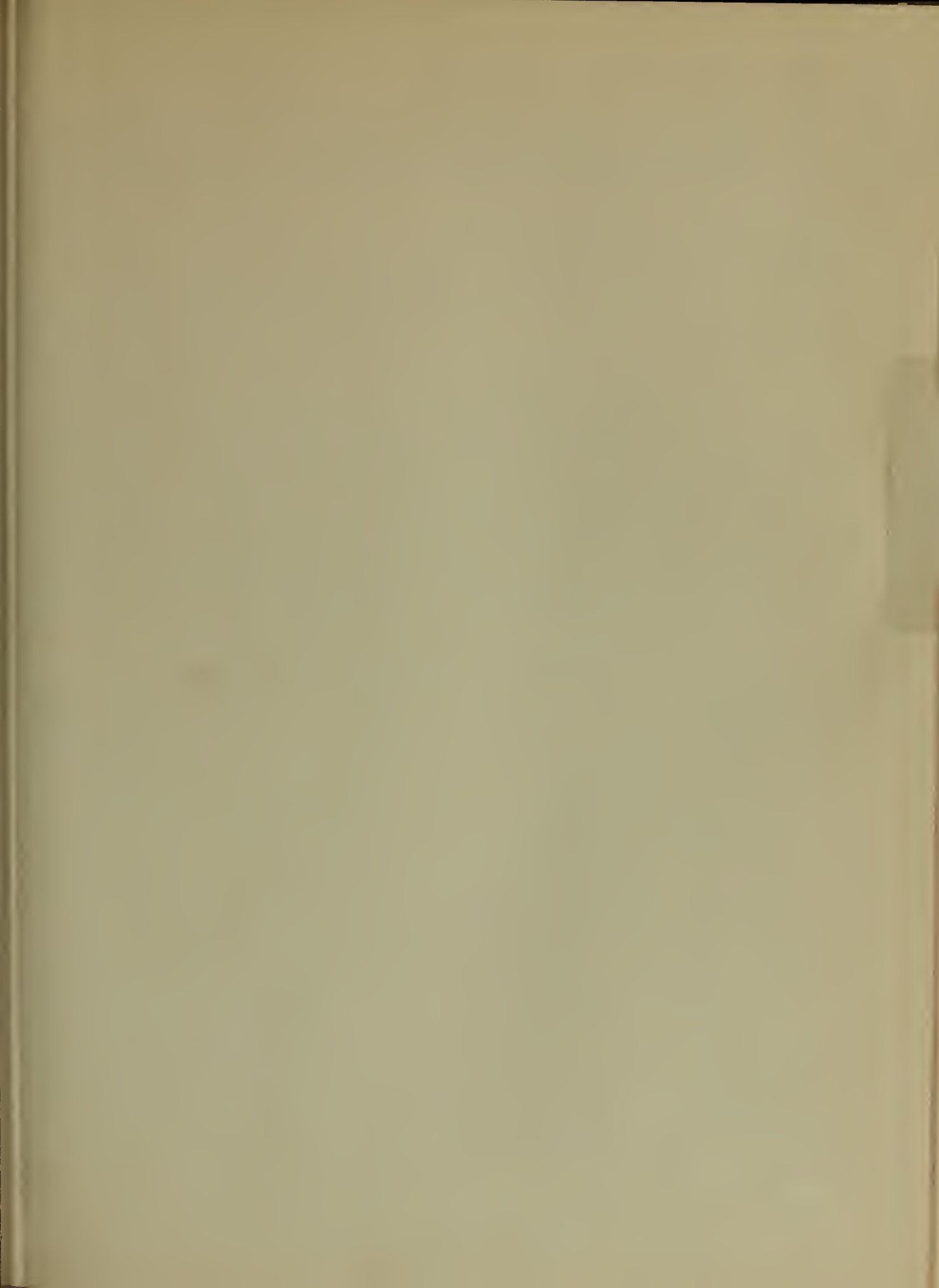
1963 CENSUS OF MINERAL INDUSTRIES

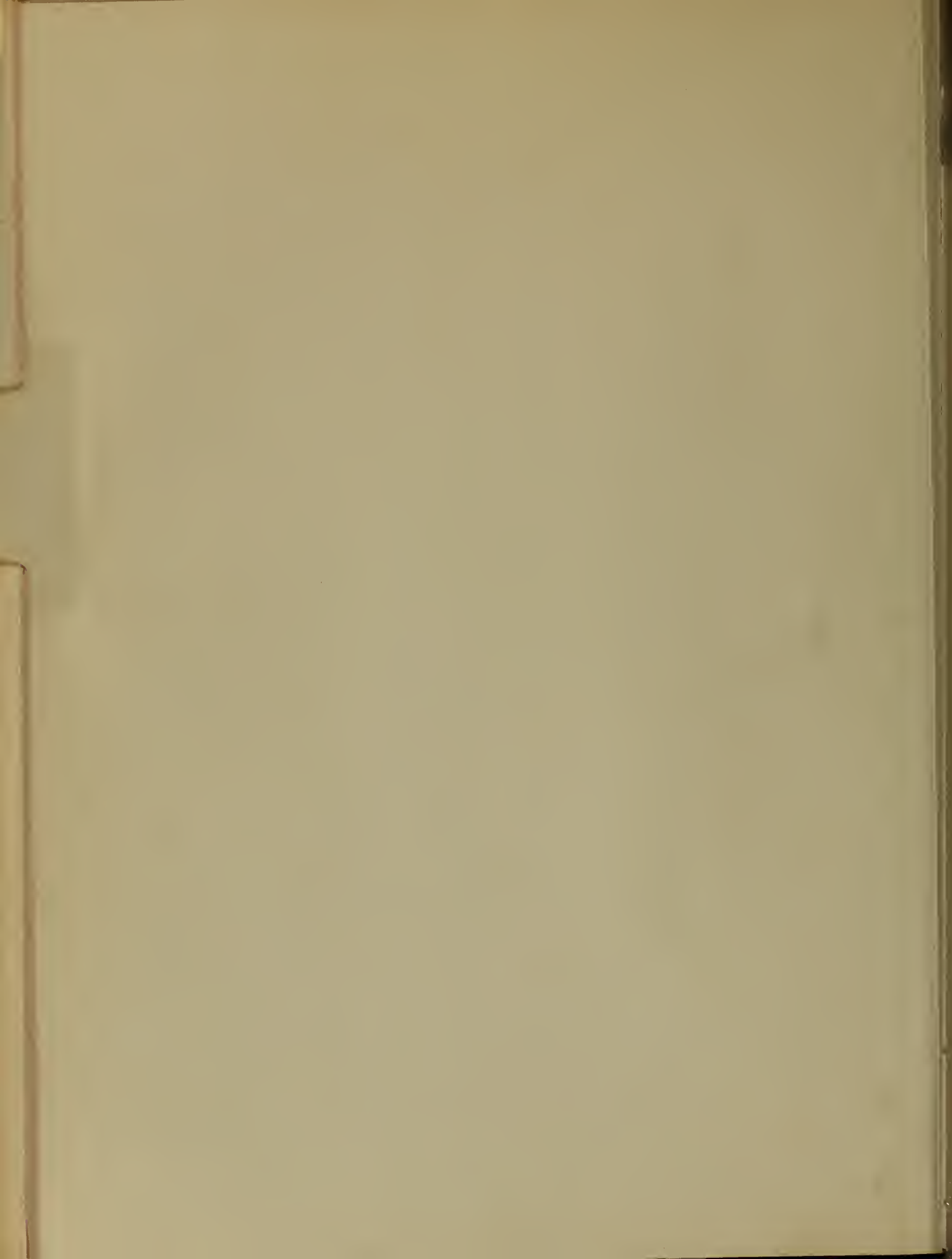
Table 2.—WATER USE IN THE MINERAL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963

Geographic area	Number of mineral establishments reporting water use								
	Total	By principal source of water ¹			By quantity of water intake ² (millions of gallons)				
		Utility	Other than utility	Source not specified	Under 1	1-9	10-19	20-99	100 and over
United States, total.....	17,107	2,258	11,473	3,376	13,328	1,300	448	1,011	1,020
New England.....	151	29	86	36	103	19	1	21	7
Maine.....	9	2	3	4	8	1	-	-	-
New Hampshire.....	16	-	11	5	10	1	-	3	2
Vermont.....	18	4	9	5	14	4	-	-	-
Massachusetts.....	56	13	34	9	37	7	-	11	1
Rhode Island.....	9	1	6	2	6	-	-	3	-
Connecticut.....	43	9	23	11	28	6	1	4	4
Middle Atlantic.....	1,424	201	867	356	1,078	112	39	95	100
New York.....	223	37	147	39	129	26	18	28	22
New Jersey.....	96	18	58	20	55	17	1	10	13
Pennsylvania.....	1,105	146	662	297	894	69	20	57	65
East North Central.....	1,956	232	1,306	418	1,414	173	52	146	171
Ohio.....	615	74	388	153	470	60	8	37	40
Indiana.....	352	32	254	66	249	33	15	22	33
Illinois.....	604	61	426	117	425	48	20	48	63
Michigan.....	251	43	157	51	171	17	6	28	29
Wisconsin.....	134	22	81	31	99	15	3	11	6
West North Central.....	1,570	172	1,094	304	1,226	115	42	85	102
Minnesota.....	157	29	93	35	98	10	-	13	36
Iowa.....	146	11	103	32	102	9	13	10	12
Missouri.....	231	32	134	65	192	11	5	7	16
North Dakota.....	98	11	75	12	83	5	1	8	1
South Dakota.....	47	1	39	7	38	2	-	4	3
Nebraska.....	193	16	138	39	162	12	3	8	8
Kansas.....	698	72	512	114	551	66	20	35	26
South Atlantic.....	1,759	132	1,111	516	1,389	132	36	78	124
Delaware.....	6	1	3	2	4	1	-	1	-
Maryland.....	78	11	46	21	60	13	-	2	3
Virginia.....	459	28	271	160	407	26	5	6	15
West Virginia.....	851	61	524	266	702	50	19	40	40
North Carolina.....	105	4	81	20	61	13	6	11	14
South Carolina.....	44	3	40	1	24	6	2	5	7
Georgia.....	101	7	64	30	61	15	4	7	14
Florida.....	115	17	82	16	70	8	-	6	31
East South Central.....	1,293	132	827	334	1,049	80	41	44	79
Kentucky.....	718	46	456	216	614	36	20	21	27
Tennessee.....	187	32	109	46	137	20	8	7	15
Alabama.....	175	31	109	35	119	9	10	5	32
Mississippi.....	213	23	153	37	179	15	3	11	5
West South Central.....	6,175	863	4,466	846	4,924	461	167	382	241
Arkansas.....	209	21	142	46	171	11	3	16	8
Louisiana.....	857	142	600	115	681	59	26	48	43
Oklahoma.....	1,049	121	782	146	831	81	35	64	38
Texas.....	4,060	579	2,942	539	3,241	310	103	254	152
Mountain.....	1,785	234	1,181	370	1,425	110	42	90	118
Montana.....	177	21	114	42	142	16	2	9	8
Idaho.....	52	5	31	16	38	2	2	-	10
Wyoming.....	295	25	223	47	228	28	9	13	17
Colorado.....	394	56	252	86	342	14	4	20	14
New Mexico.....	512	79	345	88	400	32	20	32	28
Arizona.....	105	18	53	34	79	4	2	5	15
Utah.....	198	25	131	42	154	13	3	8	20
Nevada.....	52	5	32	15	42	1	-	3	6
Pacific.....	994	263	535	196	720	98	28	70	78
Washington.....	104	16	60	28	82	6	3	6	7
Oregon.....	94	13	49	32	84	3	-	4	3
California.....	726	225	388	113	502	80	23	56	65
Alaska.....	61	6	35	20	46	9	-	3	3
Hawaii.....	9	3	3	3	6	-	2	1	-

- Represents zero.

¹Except mine water.²Includes mine water used.





1963 CENSUS OF MINERAL INDUSTRIES

MICS(P)-108

INDUSTRY SERIES

preliminary
report

Iron ores

SIC Code 1011

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Iron Ores Industry shipped products valued at \$763 million, an increase of 15 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 23 percent from 1958 to a total of 23.1

thousand employees in 1963. Value added in mining amounted to \$549 million in 1963, an increase of 12 percent from 1958.

The Iron Ores Industry represents establishments engaged primarily in mining, beneficiating, or otherwise preparing iron ores and manganiferous ores valued chiefly for their iron content. The industry includes the production of sinter and other agglomerates in association with mining and beneficiating activities or at separately operated agglomeration plants. Blast furnaces primarily engaged in producing pig iron from iron ore are classified as manufacturing plants in Industry 3312, Blast Furnaces and Steel Mills. The production of

Table 1.--GENERAL STATISTICS FOR THE IRON ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	¹ 1958	1954	1939
Establishments:					
Total.....	Number.....	207	243	225	¹ 196
With 20 employees or more.....	...do.....	100	128	135	(NA)
All employees:					
Number.....	Number.....	23,108	30,113	34,170	22,651
Payroll.....	Thousand dollars...	160,778	169,043	156,909	33,326
Production, development, and exploration workers:					
Number.....	Number.....	18,095	22,517	28,216	20,377
Man-hours.....	Thousand.....	34,521	38,926	53,288	38,513
Wages.....	Thousand dollars...	112,634	116,319	119,688	27,431
Value added in mining.....	...do.....	548,502	487,667	435,668	133,390
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	282,758	200,928	159,534	² 17,481
Minerals received for preparation only.....	...do.....	64,619	64,662	12,837	(NA)
Contract work only.....	...do.....	54,287	29,442	47,515	236
Cost of purchased machinery installed.....	...do.....	27,885	18,483	36,994	(NA)
Value of shipments and receipts.....	...do.....	762,548	664,475	547,218	(NA)
Value of net shipments and receipts.....	...do.....	711,160	617,925	539,160	150,871
Capital expenditures.....	...do.....	96,597	42,603	84,978	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	2,595	(NA)	1,795	600

(NA) Not available. ¹ Revised.

²Represents number of mines.

³Excludes cost of minerals received for preparation.

March 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



sinter and other agglomerates in conjunction with blast furnace operations is also included in manufacturing.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers, based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and

geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Iron Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishments. However, the total value of shipments and other receipts of establishments classified in the Iron Ores Industry amounted to \$763 million in 1963 of which over 98 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3A. However, in 1963, the value of gross shipments of primary products of the Iron Ores Industry shipped by that industry amounted to over 99 percent of the shipments of such products shipped by all producers.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Iron Ores Industry in 1963 was \$763 million and the value of net shipments and receipts was \$711 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value

added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.--GENERAL STATISTICS FOR THE IRON ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery in- stalled	Value of ship- ments and receipts	Capital ex- penditures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	207	100	23,108	160,778	18,095	34,521	112,634	548,502	282,758	27,885	762,548	96,597	30,113	487,667
Middle Atlantic....	13	9	3,387	21,859	2,980	5,632	18,373	55,598	19,488	1,574	74,045	2,615	(NA)	(NA)
North Central.....	106	68	16,713	119,858	12,550	23,809	78,810	430,522	240,153	21,411	603,861	88,225	22,467	362,787
Minnesota.....	71	46	11,164	80,255	8,274	15,758	51,619	346,353	142,953	8,442	474,940	22,808	15,048	291,127
South.....	49	14	1,401	7,301	1,204	2,350	5,807	17,205	6,137	845	23,255	932	(NA)	(NA)
West.....	39	9	1,607	11,760	1,361	2,730	9,644	45,177	16,980	4,055	61,387	4,825	1,293	43,659

(NA) Not available.

1963 CENSUS OF MINERALS INDUSTRIES

Table 3A.—PRIMARY PRODUCTS OF THE IRON ORES INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Includes ferruginous manganese and manganiferous iron ores valued chiefly for their iron content)

Product and geographic area	1963						1958					
	Production	Shipments including inter-plant transfers		Minerals prepared			Production	Shipments including inter-plant transfers		Minerals prepared		
		Quantity	Value	Produced and prepared at same establishment	Received from other establishments for preparation			Quantity	Value	Produced and prepared at same establishment	Received from other establishments for preparation	
					Quantity	Cost					Quantity	Cost
	(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)
United States, total:												
Crude iron ore, total ¹	152,504	41,413	133,542	112,689	30,082	52,220	109,266	50,586	311,292	59,949	19,935	57,360
Direct-shipping ore.....	12,403	13,581	91,168	(X)	(X)	(X)	32,819	34,051	278,781	(X)	(X)	(X)
Beneficiating-grade ore.....	140,101	27,832	42,374	112,689	30,082	52,220	76,446	16,535	32,511	59,949	19,935	57,360
Iron concentrates, total.....	63,694	(D)	(D)	28,271	2,089	12,396	34,569	22,535	190,364	12,074	881	7,302
For consumption.....	34,400	33,858	257,162	(X)	(X)	(X)	20,819	20,781	176,325	(X)	(X)	(X)
For agglomeration.....	29,294	(D)	(D)	28,271	2,089	12,396	13,750	1,754	14,039	12,074	881	7,302
Iron agglomerates.....	26,586	26,660	353,963	(X)	(X)	(X)	13,792	13,698	169,735	(X)	(X)	(X)
Receipts for preparing minerals on a custom or toll basis (included in value of concentrate and agglomerates above).....	(X)	(X)	4,861	(X)	(X)	(X)	(X)	(X)	1,451	(X)	(X)	(X)
Net production and shipments ² :												
Iron ore.....	73,389	74,100	702,293	(X)	(X)	(X)	67,430	68,530	624,841	(X)	(X)	(X)
Manganiferous iron ore (included above).....	(D)	418	2,753	(X)	(X)	(X)	437	409	3,042	(X)	(X)	(X)
Middle Atlantic:												
Crude iron ore.....	9,213	-	-	9,409	(D)	(D)	7,331	(D)	(D)	7,200	(D)	(D)
Iron concentrates, total.....	4,651	919	14,271	3,767	(D)	(D)	3,190	787	14,429	2,210	(D)	(D)
For consumption.....	885	919	14,271	(X)	(X)	(X)	809	787	14,429	(X)	(X)	(X)
For agglomeration.....	3,766	-	-	3,767	(D)	(D)	2,381	787	14,429	2,210	(D)	(D)
Iron agglomerates.....	4,074	4,085	60,133	(X)	(X)	(X)	2,239	2,236	31,627	(X)	(X)	(X)
Net iron ore production and shipments ²	4,959	5,004	74,404	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
New York:												
Net iron ore production and shipments ²	2,354	2,388	29,376	1,930	-	-	2,127	1,943	24,325	1,671	(D)	(D)
North Central:												
Crude iron ore, total.....	120,759	39,044	118,687	82,860	(D)	(D)	86,010	41,386	236,287	44,068	16,486	32,973
Direct-shipping ore.....	10,182	11,343	76,890	(X)	(X)	(X)	27,155	26,608	212,729	(X)	(X)	(X)
Beneficiating-grade ore.....	110,577	27,701	41,797	82,860	(D)	(D)	58,855	14,778	23,558	44,068	16,486	32,973
Iron concentrates, total.....	49,973	(D)	(D)	22,994	(D)	(D)	25,926	17,894	143,980	(D)	(D)	(D)
For consumption.....	25,954	25,376	192,942	(X)	(X)	(X)	16,283	(X)	(X)	(X)	(X)	(X)
For agglomeration.....	24,019	(D)	(D)	22,994	(D)	(D)	9,643	17,894	143,980	(D)	(D)	(D)
Iron agglomerates.....	21,064	21,123	275,871	(X)	(X)	(X)	9,399	9,307	103,083	(X)	(X)	(X)
Net production and shipments ² :												
Iron ore.....	57,200	57,842	545,703	(X)	(X)	(X)	52,837	(NA)	(NA)	(X)	(X)	(X)
Manganiferous iron ore (included above).....	(D)	418	2,753	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
Michigan:												
Crude iron ore.....	16,516	(D)	(D)	(D)	(D)	(D)	9,172	7,523	63,941	(D)	(D)	(D)
Net iron ore production and shipments ²	10,381	10,802	105,343	(D)	(D)	(D)	8,509	8,254	71,738	-	(D)	(D)
Minnesota:												
Crude iron ore, total.....	102,867	31,808	66,212	(D)	28,652	40,935	74,862	32,953	164,577	42,080	16,089	29,552
Direct-shipping ore.....	5,293	31,808	66,212	(X)	(X)	(X)	18,400	32,953	164,577	(X)	(X)	(X)
Beneficiating-grade ore.....	97,574	31,808	66,212	(D)	28,652	40,935	56,462	32,953	164,577	42,080	16,089	29,552
Iron concentrates.....	41,480	24,940	185,780	(D)	(D)	(D)	24,691	16,422	129,492	(D)	(D)	(D)
Net iron ore production and shipments ²	46,425	46,105	435,074	(X)	(X)	(X)	42,785	(NA)	(NA)	(X)	(X)	(X)
South:												
Crude iron ore, total.....	9,430	245	1,408	9,693	-	-	8,092	4,592	41,250	5,484	(D)	(D)
Direct-shipping ore.....	167	245	1,408	(X)	(X)	(X)	865	4,592	41,250	(X)	(X)	(X)
Beneficiating-grade ore.....	9,263	245	1,408	9,693	-	-	7,227	4,592	41,250	5,484	(D)	(D)
Net iron ore production and shipments ²	3,288	3,273	22,898	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
Alabama:												
Crude iron ore.....	5,462	133	904	5,328	-	-	5,093	4,528	41,008	37,499	(³)	(D)
Iron concentrates and agglomerates.....	1,950	1,977	13,536	-	-	-	3,800	2,484	33,955	(³)	(³)	(D)
Net iron ore production and shipments ²	2,083	2,110	14,440	(X)	(X)	(X)	4,602	(NA)	(NA)	(X)	(X)	(X)
West:												
Crude iron ore, total.....	13,102	2,124	13,447	10,727	-	-	7,833	(NA)	(NA)	3,197	(D)	(D)
Direct-shipping ore.....	2,055	2,124	13,447	(X)	(X)	(X)	7,833	(NA)	(NA)	(X)	(X)	(X)
Beneficiating-grade ore.....	11,047	2,124	13,447	10,727	-	-	7,833	(NA)	(NA)	3,197	(D)	(D)
Net iron ore production and shipments ²	7,942	7,980	59,288	(X)	(X)	(X)	(NA)	6,445	50,227	(X)	(X)	(X)
Nevada:												
Crude iron ore.....	1,032	(D)	(D)	1,031	-	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Net iron ore production and shipments ²	760	760	3,989	(X)	(X)	(X)	647	594	3,626	(X)	(X)	(X)

- Represents zero.

(D) Withheld to avoid disclosure of figures for individual companies.

(NA) Not available.

(X) Not applicable.

¹Except for materials received from other establishments for preparation, represents only crude iron ores and manganiferous iron ores produced in the Iron Ore Industry.²Represents the sum of direct-shipping iron ore, iron concentrates for consumption, and iron agglomerates.³Figures for quantity of materials agglomerated are combined with figures for quantity of crude ore concentrated and figures for materials received from others are combined with figures for materials prepared at the same establishment where mined.

1963 CENSUS OF MINERAL INDUSTRIES

MC63(P)-108

INDUSTRY SERIES

preliminary
report

Iron ores

SIC Code 1011

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Iron Ores Industry shipped products valued at \$763 million, an increase of 15 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 23 percent from 1958 to a total of 23.1

thousand employees in 1963. Value added in mining amounted to \$549 million in 1963, an increase of 12 percent from 1958.

The Iron Ores Industry represents establishments engaged primarily in mining, beneficiating, or otherwise preparing iron ores and manganiferous ores valued chiefly for their iron content. The industry includes the production of sinter and other agglomerates in association with mining and beneficiating activities or at separately operated agglomeration plants. Blast furnaces primarily engaged in producing pig iron from iron ore are classified as manufacturing plants in Industry 3312, Blast Furnaces and Steel Mills. The production of

Table 1.--GENERAL STATISTICS FOR THE IRON ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	207	243	225	196
With 20 employees or more.....	..do.....	100	128	135	(NA)
All employees:					
Number.....	Number.....	23,108	30,113	34,170	22,651
Payroll.....	Thousand dollars...	160,778	169,043	156,909	33,326
Production, development, and exploration workers:					
Number.....	Number.....	18,095	22,517	28,216	20,377
Man-hours.....	Thousand.....	34,521	38,926	53,288	38,513
Wages.....	Thousand dollars...	112,634	116,319	119,688	27,431
Value added in mining.....	..do.....	548,502	487,667	435,668	133,390
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	..do.....	282,758	200,928	159,534	² 17,481
Minerals received for preparation only.....	..do.....	64,619	64,662	12,837	(NA)
Contract work only.....	..do.....	54,287	29,442	47,515	236
Cost of purchased machinery installed.....	..do.....	27,885	18,483	36,994	(NA)
Value of shipments and receipts.....	..do.....	762,548	664,475	547,218	(NA)
Value of net shipments and receipts.....	..do.....	711,160	617,925	539,160	150,871
Capital expenditures.....	..do.....	96,597	42,603	84,978	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	2,595	(NA)	1,795	600

(NA) Not available. [†] Revised.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



sinter and other agglomerates in conjunction with blast furnace operations is also included in manufacturing.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers, based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and

geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Iron Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishments. However, the total value of shipments and other receipts of establishments classified in the Iron Ores Industry amounted to \$763 million in 1963 of which over 98 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3A. However, in 1963, the value of gross shipments of primary products of the Iron Ores Industry shipped by that industry amounted to over 99 percent of the shipments of such products shipped by all producers.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments for preparation, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Iron Ores Industry in 1963 was \$763 million and the value of net shipments and receipts was \$711 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value

added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.--GENERAL STATISTICS FOR THE IRON ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963												1958	
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	207	100	23,108	160,778	18,095	34,521	112,634	548,502	282,758	27,885	762,548	96,597	30,113	487,667
Middle Atlantic....	13	9	3,387	21,859	2,980	5,632	18,373	55,598	19,488	1,574	74,045	2,615	(NA)	(NA)
North Central.....	106	68	16,713	119,858	12,550	23,809	78,810	430,522	240,153	21,411	603,861	88,225	22,467	362,787
Minnesota.....	71	46	11,164	80,255	8,274	15,758	51,619	346,353	142,953	8,442	474,940	22,808	15,048	291,127
South.....	49	14	1,401	7,301	1,204	2,350	5,807	17,205	6,137	845	23,255	932	(NA)	(NA)
West.....	39	9	1,607	11,760	1,361	2,730	9,644	45,177	16,980	4,055	61,387	4,825	1,293	43,659

(NA) Not available.

Table 3A.—PRIMARY PRODUCTS OF THE IRON ORES INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Includes ferruginous manganese and manganiferous iron ores valued chiefly for their iron content)

Product and geographic area	1963						1958					
	Production	Shipments including inter-plant transfers		Minerals prepared			Production	Shipments including inter-plant transfers		Minerals prepared		
		Quantity	Value	Produced and prepared at same establishment	Received from other establishments for preparation			Quantity	Value	Produced and prepared at same establishment	Received from other establishments for preparation	
					Quantity	Cost					Quantity	Cost
(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)	(1,000 long tons)	(1,000 long tons)	(\$1,000)	
United States, total:												
Crude iron ore, total ¹	152,504	41,413	133,542	112,689	30,082	52,220	109,266	50,586	311,292	59,949	19,935	57,360
Direct-shipping ore.....	12,403	13,581	91,168	(X)	(X)	(X)	32,819	34,051	278,781	(X)	(X)	(X)
Beneficiating-grade ore.....	140,101	27,832	42,374	112,689	30,082	52,220	76,446	16,535	32,511	59,949	19,935	57,360
Iron concentrates, total.....	63,694	(D)	(D)	28,271	2,089	12,396	34,569	22,535	190,364	12,074	881	7,302
For consumption.....	34,400	33,858	257,162	(X)	(X)	(X)	20,819	20,781	176,325	(X)	(X)	(X)
For agglomeration.....	29,294	(D)	(D)	28,271	2,089	12,396	13,750	1,754	14,039	12,074	881	7,302
Iron agglomerates.....	26,586	26,660	353,963	(X)	(X)	(X)	13,792	13,698	169,735	(X)	(X)	(X)
Receipts for preparing minerals on a custom or toll basis (included in value of concentrates and agglomerates above).....	(X)	(X)	4,861	(X)	(X)	(X)	(X)	(X)	1,451	(X)	(X)	(X)
Net production and shipments ² :												
Iron ore.....	73,389	74,100	702,293	(X)	(X)	(X)	67,430	68,530	624,841	(X)	(X)	(X)
Manganiferous iron ore (included above).....	(D)	418	2,753	(X)	(X)	(X)	437	409	3,042	(X)	(X)	(X)
Middle Atlantic:												
Crude iron ore.....	9,213	-	-	9,409	(D)	(D)	7,331	(D)	(D)	7,200	(D)	(D)
Iron concentrates, total.....	4,651	919	14,271	3,767	(D)	(D)	3,190	787	14,429	2,210	(D)	(D)
For consumption.....	885	919	14,271	(X)	(X)	(X)	809	(X)	(X)	(X)	(X)	(X)
For agglomeration.....	3,766	-	-	3,767	(D)	(D)	2,381	787	14,429	2,210	(D)	(D)
Iron agglomerates.....	4,074	4,085	60,133	(X)	(X)	(X)	2,239	2,236	31,627	(X)	(X)	(X)
Net iron ore production and shipments ²	4,959	5,004	74,404	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
New York:												
Net iron ore production and shipments ²	2,354	2,388	29,376	1,930	-	-	2,127	1,943	24,325	1,671	(D)	(D)
North Central:												
Crude iron ore, total.....	120,759	39,044	118,687	82,860	(D)	(D)	86,010	41,386	236,287	44,068	16,486	32,973
Direct-shipping ore.....	10,182	11,343	76,890	(X)	(X)	(X)	27,155	26,608	212,729	(X)	(X)	(X)
Beneficiating-grade ore.....	110,577	27,701	41,797	82,860	(D)	(D)	58,855	14,778	23,558	44,068	16,486	32,973
Iron concentrates, total.....	49,973	(D)	(D)	22,994	(D)	(D)	25,926	17,894	143,980	(D)	(D)	(D)
For consumption.....	25,954	25,376	192,942	(X)	(X)	(X)	16,283	(X)	(X)	(X)	(X)	(X)
For agglomeration.....	24,019	(D)	(D)	22,994	(D)	(D)	9,643	17,894	143,980	(D)	(D)	(D)
Iron agglomerates.....	21,064	21,123	275,871	(X)	(X)	(X)	9,399	9,307	103,083	(X)	(X)	(X)
Net production and shipments ² :												
Iron ore.....	57,200	57,842	545,703	(X)	(X)	(X)	52,837	(NA)	(NA)	(X)	(X)	(X)
Manganiferous iron ore (included above).....	(D)	418	2,753	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
Michigan:												
Crude iron ore.....	16,516	(D)	(D)	(D)	(D)	(D)	9,172	7,523	63,941	(D)	(D)	(D)
Net iron ore production and shipments ²	10,381	10,802	105,343	(D)	(D)	(D)	8,509	8,254	71,738	-	(D)	(D)
Minnesota:												
Crude iron ore, total.....	102,867	31,808	66,212	(D)	28,652	40,935	74,862	32,953	164,577	42,080	16,089	29,552
Direct-shipping ore.....	5,293	31,808	66,212	(X)	(X)	(X)	18,400	(X)	(X)	(X)	(X)	(X)
Beneficiating-grade ore.....	97,574	(D)	(D)	(D)	28,652	40,935	56,462	32,953	164,577	42,080	16,089	29,552
Iron concentrates.....	41,480	24,940	185,780	(D)	(D)	(D)	24,691	16,422	129,492	(D)	(D)	(D)
Net iron ore production and shipments ²	46,425	46,105	435,074	(X)	(X)	(X)	42,785	(NA)	(NA)	(X)	(X)	(X)
South:												
Crude iron ore, total.....	9,430	245	1,408	9,693	-	-	8,092	4,592	41,250	5,484	(D)	(D)
Direct-shipping ore.....	167	245	1,408	(X)	(X)	(X)	865	4,592	41,250	(X)	(X)	(X)
Beneficiating-grade ore.....	9,263	(D)	(D)	9,693	-	-	7,227	(D)	(D)	5,484	(D)	(D)
Net iron ore production and shipments ²	3,288	3,273	22,898	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
Alabama:												
Crude iron ore.....	5,462	133	904	5,328	-	-	5,093	4,528	41,008	37,499	(³)	(D)
Iron concentrates and agglomerates.....	1,950	1,977	13,536	-	-	-	3,800	2,484	33,955	(³)	(³)	(D)
Net iron ore production and shipments ²	2,083	2,110	14,440	(X)	(X)	(X)	4,602	(NA)	(NA)	(X)	(X)	(X)
West:												
Crude iron ore, total.....	13,102	2,124	13,447	10,727	-	-	7,833	(NA)	(NA)	3,197	(D)	(D)
Direct-shipping ore.....	2,055	2,124	13,447	(X)	(X)	(X)	(NA)	(NA)	(NA)	(X)	(X)	(X)
Beneficiating-grade ore.....	11,047	(D)	(D)	10,727	-	-	7,833	(NA)	(NA)	3,197	(D)	(D)
Net iron ore production and shipments ²	7,942	7,980	59,288	(X)	(X)	(X)	(NA)	6,445	50,227	(X)	(X)	(X)
Nevada:												
Crude iron ore.....	1,032	(D)	(D)	1,031	-	-	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Net iron ore production and shipments ²	760	760	3,989	(X)	(X)	(X)	647	594	3,626	(X)	(X)	(X)

- Represents zero.

(D) Withheld to avoid disclosure of figures for individual companies.

(NA) Not available.

(X) Not applicable.

¹Except for materials received from other establishments for preparation, represents only crude iron ores and manganiferous iron ores produced in the Iron Ores Industry.²Represents the sum of direct-shipping iron ore, iron concentrates for consumption, and iron agglomerates.³Figures for quantity of materials agglomerated are combined with figures for quantity of crude ore concentrated and figures for materials received from others are combined with figures for materials prepared at the same establishment where mined.

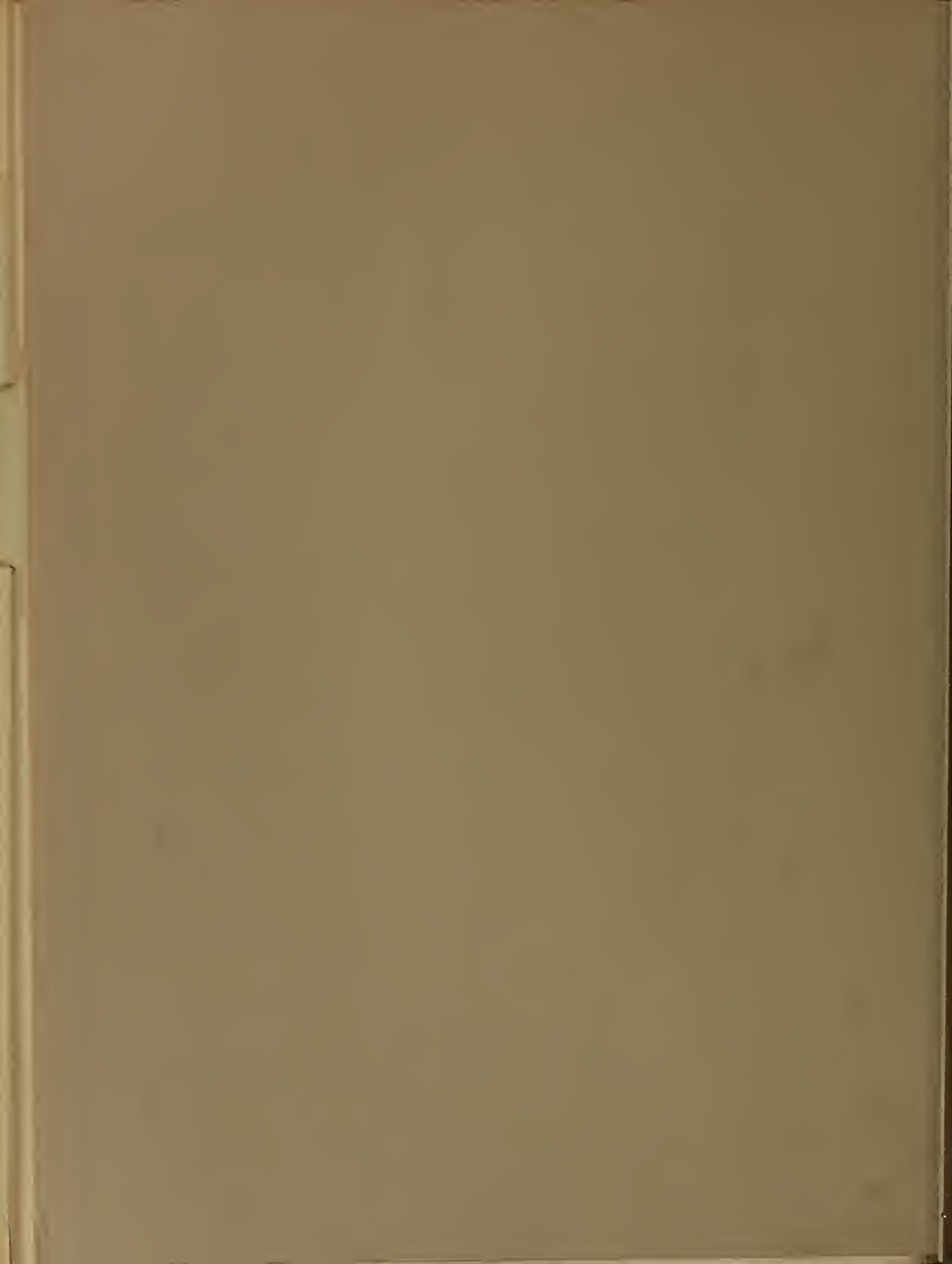
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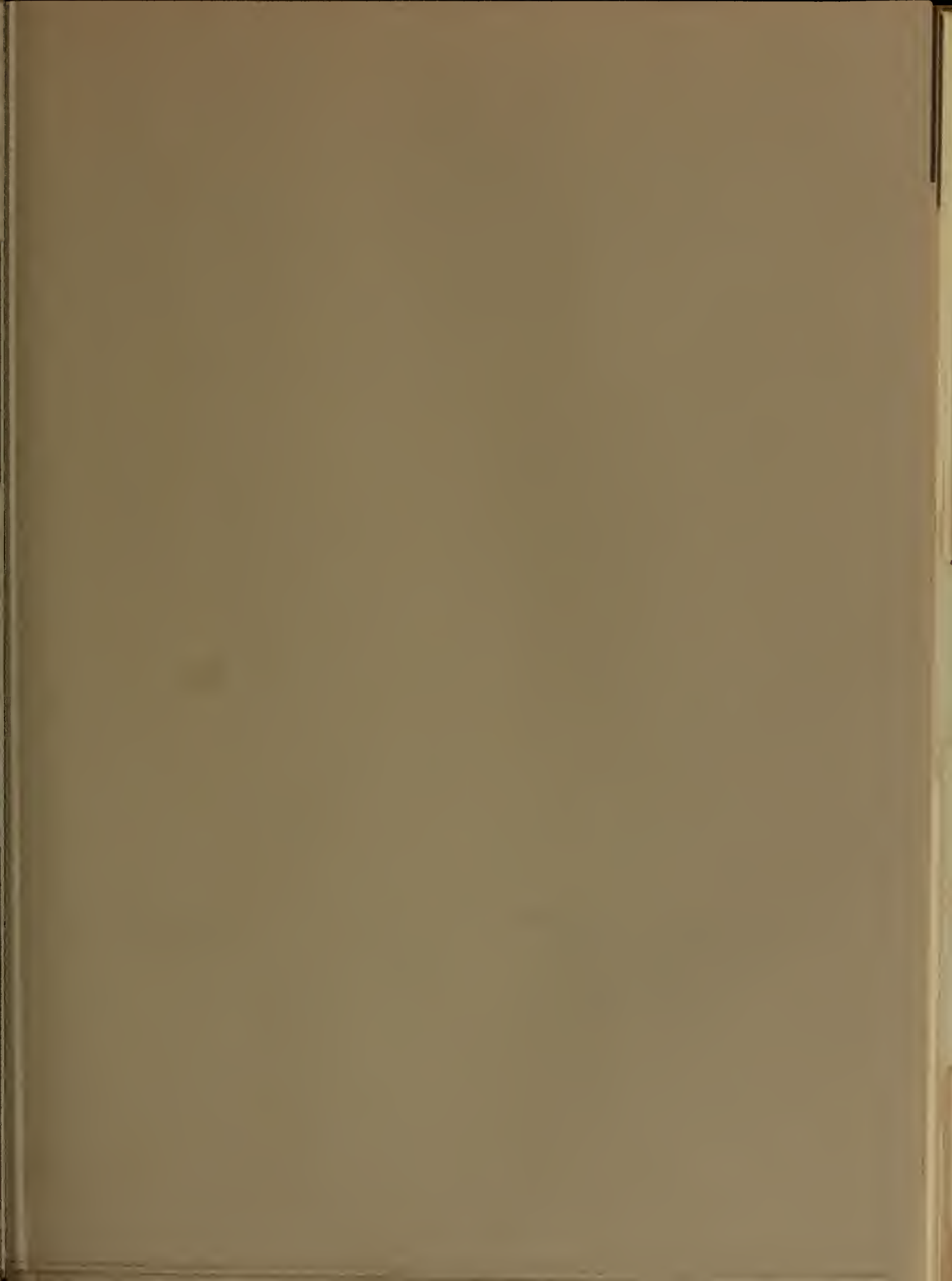
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Table 3B.--INDEXES OF PRODUCTION AND UNIT VALUE FOR IRON ORES SHIPPED BY ALL PRODUCERS
IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product code	Product and year	Production	Unit value
1011	Iron ores.....1963...	106	118
	.....1958...	91	123
	Direct-shipping iron ore.....1963...	25	103
	.....1958...	67	125
	Iron concentrates for consumption.....1963...	146	110
1958...	88	123
	Iron agglomerates.....1963...	481	116
1958...	249	109





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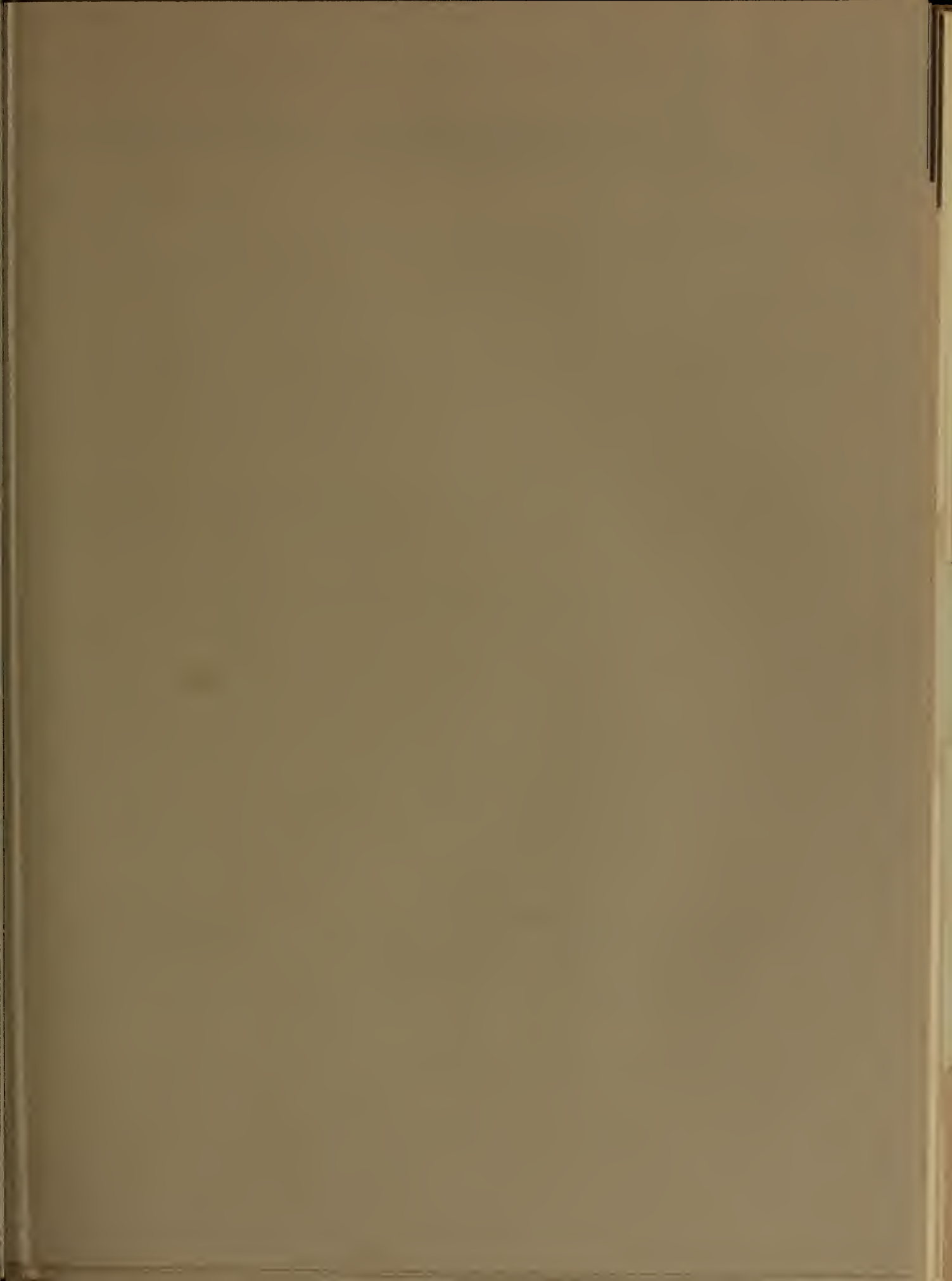
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M1063(P)-10C-1

INDUSTRY SERIES

**preliminary
report**

Copper ores

SIC Code 1021

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Copper Ores Industry shipped products valued at \$670 million, an increase of 46 percent over 1958, according to preliminary results obtained from the 1963 census.

Average employment in this industry showed a decrease of 4 percent from 1958 to a total of 26.4 thousand employees in 1963. Value added in mining amounted to \$417 million in 1963, an increase of 56 percent from 1958.

The Copper Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing copper ores. This industry also includes establishments primarily engaged in the recovery of copper concentrates by precipitation and leaching of copper ore. Establishments

Table 1.—GENERAL STATISTICS FOR THE COPPER ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	158	148	210	¹ 51
With 20 employees or more.....	...do.....	40	38	41	(NA)
All employees:					
Number.....	Number.....	26,440	27,642	27,813	26,752
Payroll.....	Thousand dollars...	187,131	143,501	136,065	42,564
Production, development, and exploration workers:					
Number.....	Number.....	21,363	20,898	21,544	23,844
Man-hours.....	Thousand.....	45,319	41,021	46,676	51,239
Wages.....	Thousand dollars...	142,352	106,357	98,491	34,486
Value added in mining.....	...do.....	416,997	266,485	334,876	108,494
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	294,622	216,842	232,242	² 33,140
Minerals received for preparation only.....	...do.....	129,833	89,011	100,693	(NA)
Contract work only.....	...do.....	30,530	22,024	43,873	511
Cost of purchased machinery installed.....	...do.....	45,567	19,191	23,821	(NA)
Value of shipments and receipts.....	...do.....	670,162	457,644	508,729	145,590
Value of net shipments and receipts.....	...do.....	544,228	374,428	409,911	141,634
Capital expenditures.....	...do.....	87,024	44,874	82,210	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	1,865	(NA)	1,546	753

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

May 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



primarily engaged in the recovery of refined copper by leaching copper concentrates are classified in Major Group 33, Primary Metal Industries.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent averages of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value

measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Copper Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing. However, the total value of shipments and other receipts of establishments classified in the Copper Ores Industry amounted to \$670 million in 1963 of which about 97 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure appears in table 3A. However, in 1963, the value of gross shipments of primary products of the Copper Ores Industry shipped by that industry amounted to about 98.5 percent of the shipments of such products shipped by all producers.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Copper Ores Industry in 1963 was \$670 million and the value of net shipments and receipts was \$544 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries. These are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available.

1963 CENSUS OF MINERAL INDUSTRIES

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The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and

"secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.--GENERAL STATISTICS FOR THE COPPER ORES INDUSTRY BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total,.....	158	40	26,440	187,131	21,363	45,319	142,352	416,997	294,622	45,567	670,162	87,024	27,642	266,485
Arizona,.....	64	19	12,498	92,270	10,443	23,873	76,101	257,715	114,540	8,649	345,066	35,838	13,072	165,569
Other States,.....	94	21	13,942	94,861	10,920	21,446	66,251	159,282	180,082	36,918	325,096	51,186	14,570	100,916

Table 3A.—PRIMARY PRODUCTS OF THE COPPER ORES INDUSTRY PRODUCED

Product and geographic areas	1963				
	Production (1,000 short tons)	Shipments including interplant transfers or receipts for milling		Gross quantity of metals contained ²	
		Quantity (1,000 short tons)	Value (\$1,000)	Copper (1,000 pounds)	Lead (1,000 pounds)
United States, total:					
1 Production and shipments:					
Crude ore mined in the copper ores industry, total.....	145,317	(X)	(X)	(NA)	(NA)
2 Ore mined:					
From underground operations.....	22,845	(X)	(X)	(NA)	(NA)
3 From open-pit operations.....	122,472	(X)	(X)	(NA)	(NA)
4 Ore and residues:					
For shipment to smelters.....	3,700	3,700	13,355	90,856	-
5 For shipment to mills.....	57,158	57,158	125,934	998,678	-
6 Copper concentrates.....	4,257	4,257	470,725	2,080,520	767
7 Copper precipitates.....	168	169	50,115	248,462	(X)
8 Minerals milled in the copper ores industry:					
Mined and milled at same establishment.....	86,307	(X)	(X)	(NA)	(NA)
9 Received from other establishments for milling.....	(X)	57,217	129,833	(NA)	(NA)
Arizona:					
10 Production and shipments:					
Crude ore mined in the copper ores industry, total.....	80,773	(X)	(X)	(NA)	(NA)
11 Ore mined:					
From underground operations.....	14,328	(X)	(X)	(NA)	(NA)
12 From open-pit operations.....	66,445	(X)	(X)	(NA)	(NA)
13 Ore and residues shipped to smelters and mills.....	(X)	11,058	35,238	259,568	-
14 Copper concentrates and precipitates.....	2,521	2,521	303,586	1,232,406	-
15 Minerals milled in the copper ores industry.....	⁶ 77,027	(⁶)	(D)	(NA)	(NA)
Other States:					
16 Production and shipments:					
Crude ore mined in the copper ores industry, total.....	64,544	(X)	(X)	(NA)	(NA)
17 Ore mined:					
From underground operations.....	8,517	(X)	(X)	(NA)	(NA)
18 From open-pit operations.....	56,027	(X)	(X)	(NA)	(NA)
19 Ore and residues shipped to smelters and mills.....	(X)	49,800	104,051	829,966	-
20 Copper concentrates and precipitates.....	1,904	1,905	217,254	1,096,576	767
21 Minerals milled in the copper ores industry.....	⁶ 66,497	(⁶)	(D)	(NA)	(NA)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Excludes data for Alaska, where less than 15 thousand pounds of copper were contained in shipments of ores and residues valued at less than \$10 thousand.

²Represents metal content of production where both production and shipments are shown.

³Figure for zinc content of copper ore for shipment to smelters is included with figure for zinc content of copper concentrates.

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IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

1963—Continued			1958 ¹								
Gross quantity of metals contained ² —continued			Production (1,000 short tons)	Shipments including interplant transfers or receipts for milling		Gross quantity of metals contained ²					
Zinc (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)		Quantity (1,000 short tons)	Value (\$1,000)	Copper (1,000 pounds)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)	
(NA)	(NA)	(NA)	111,957	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	1
(NA)	(NA)	(NA)	24,096	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	2
(NA)	(NA)	(NA)	87,861	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	3
(³)	17.5	392	(X)	3,930	21,622	114,610	538	465	34.8	1,071	4
-	719.5	11,911	(X)	46,878	83,166	849,820	-	-	460.4	5,580	5
³ 1,469	405.0	9,150	3,307	3,186	316,147	1,677,879	1,007	612	430.5	7,403	6
(X)	(X)	(X)	(NA)	112	31,650	174,868	(X)	(X)	(X)	(X)	7
(NA)	(NA)	(NA)	65,605	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	8
(NA)	(NA)	(NA)	(X)	47,257	89,011	(NA)	(NA)	(NA)	(NA)	(NA)	9
(NA)	(NA)	(NA)	56,525	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	10
(NA)	(NA)	(NA)	14,352	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	11
(NA)	(NA)	(NA)	42,173	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	12
(D)	(D)	(D)	(X)	3,925	23,410	135,468	6	(D)	38.6	904	13
(D)	(D)	⁴ 4,116	⁵ 1,731	1,657	185,277	871,384	-	-	77.8	2,743	14
(NA)	(NA)	(NA)	⁶ 55,871	(⁶)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	15
(NA)	(NA)	(NA)	55,432	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	16
(NA)	(NA)	(NA)	9,744	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	17
(NA)	(NA)	(NA)	45,688	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	18
-	(D)	(D)	(X)	46,883	81,378	828,962	532	(D)	456.6	5,747	19
(D)	(D)	⁴ 5,426	⁵ 1,576	1,641	162,520	981,363	1,007	612	352.7	4,660	20
(NA)	(NA)	(NA)	⁶ 56,991	(⁶)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	21

⁴Figure for silver content of copper ore for shipment to smelters is included with figure for silver content of copper concentrates.⁵Represents concentrates only.⁶Quantity of minerals received from other establishments for milling is combined with quantity of minerals mined and milled at the same establishment.

1963 CENSUS OF MINERAL INDUSTRIES

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR COPPER ORES SHIPPED BY ALL PRODUCERS
IN THE UNITED STATES: 1963 AND 1958(Indexes 1954 = 100)¹

Product code	Product and year	Production	Unit value
1021	Copper ores.....1963...	146	93
	.....1958...	118	79
	Crude ore and residues mined in the copper ores industry for shipment to smelters.....1963...	65	70
	.....1958...	82	90
	Copper concentrates.....1963...	150	93
	.....1958...	121	78
	Copper precipitates.....1963...	183	97
	.....1958...	128	87

¹Quantity figures used are based on copper content of ores, concentrates, or precipitates produced or shipped.

PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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MIC3(P)-10C-2

INDUSTRY SERIES

preliminary
report

Lead and zinc ores

SIC Code 1031

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Lead and Zinc Ores Industry shipped products valued at \$136 million, an increase of 13 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed a decrease of 16 percent from 1958 to a total of 9.4 thousand employees in 1963. Value added in mining amounted to \$85 million in 1963, an increase of 15 percent from 1958.

The Lead Ores Subindustry had value of shipments of \$51 million during 1963, a decrease of 33 percent from 1954; average employment of 4.3 thousand during 1963, a decrease of 37 percent from 1958; and value added in mining of \$34 million during 1963, a decrease of 29 percent from 1958.

Table 1A.—GENERAL STATISTICS FOR THE LEAD AND ZINC ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939
Establishments:					
Total.....	Number.....	207	288	520	² 260
With 20 employees or more.....	...do.....	46	52	90	(NA)
All employees:					
Number.....	Number.....	9,435	11,227	16,566	17,725
Payroll.....	Thousand dollars...	49,365	54,397	71,363	25,337
Production, development, and exploration workers:					
Number.....	Number.....	7,840	8,728	13,592	15,731
Man-hours.....	Thousand.....	14,801	16,734	27,554	32,481
Wages.....	Thousand dollars...	38,000	39,001	53,676	20,253
Value added in mining.....	...do.....	84,659	73,679	107,409	47,310
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	59,433	52,581	74,116	³ 15,341
Minerals received for preparation only.....	...do.....	25,985	21,517	35,116	(NA)
Contract work only.....	...do.....	3,557	2,952	6,080	363
Cost of purchased machinery installed.....	...do.....	4,215	2,920	5,942	(NA)
Value of shipments and receipts.....	...do.....	136,210	120,561	175,947	72,648
Value of net shipments and receipts.....	...do.....	115,753	103,843	140,132	62,651
Capital expenditures.....	...do.....	12,097	8,619	11,520	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	446	(NA)	749	353

(NA) Not available.

¹Excludes data for 2 establishments in Alaska with employment in the range 0-4.

²Represents number of mines.

³Excludes cost of minerals received for preparation.

July 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



The Zinc Ores Subindustry had value of shipments of \$86 million during 1963, an increase of 90 percent from 1958; average employment of 5.1 thousand during 1963, an increase of 18 percent from 1958; and value added in mining of \$51 million during 1963, an increase of 97 percent from 1958.

The Lead and Zinc Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing lead ores, zinc ores, or lead-zinc ores. The Lead Ores Subindustry represents establishments at which the principal metal contained in ores mined or milled, measured by value, was lead. The Zinc Ores Subindustry represents establishments at which the principal metal contained in ores mined or milled, measured by value, was zinc.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent averages of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Lead and Zinc Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing. However, the total value of shipments and other receipts of establishments classified in the Lead and Zinc Ores Industry amounted to \$136 million in 1963 of which about 93 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure appears in table 3A. However, in 1963, the value of shipments of primary products of the Lead and Zinc Ores Industry shipped by that industry amounted to about 97.6 percent of the shipments of such products shipped by all producers.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Lead and Zinc Ores Industry in 1963 was \$136 million and the value of net shipments and receipts was \$116 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production

and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries. These are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE LEAD ORES SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939
Establishments:					
Total.....	Number.....	125	211	343	² 86
With 20 employees or more.....	...do.....	13	26	41	(NA)
All employees:					
Number.....	Number.....	4,324	6,883	8,720	8,052
Payroll.....	Thousand dollars...	21,874	33,759	39,002	12,841
Production, development, and exploration workers:					
Number.....	Number.....	3,410	5,460	7,156	7,041
Man-hours.....	Thousand.....	5,965	10,397	14,654	14,194
Wages.....	Thousand dollars...	15,341	24,843	29,549	9,979
Value added in mining.....	...do.....	34,150	48,023	62,713	24,277
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	20,919	30,446	34,443	³ 7,190
Contract work only.....	...do.....	2,538	2,108	2,829	149
Cost of purchased machinery installed.....	...do.....	1,759	1,630	2,878	(NA)
Value of shipments and receipts.....	...do.....	50,582	75,603	94,874	34,517
Capital expenditures.....	...do.....	6,246	4,496	5,160	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	211	(NA)	423	194

(NA) Not available.

¹Excludes data for 2 establishments in Alaska with employment in the range 0-4.

²Represents number of mines.

³Excludes cost of minerals received for preparation.

1963 CENSUS OF MINERAL INDUSTRIES

Table 1C.—GENERAL STATISTICS FOR THE ZINC ORES SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	82	77	177	¹ 174
With 20 employees or more.....	do.....	33	26	49	(NA)
All employees:					
Number.....	Number.....	5,111	4,344	7,846	9,673
Payroll.....	Thousand dollars...	27,491	20,638	32,361	12,496
Production, development, and exploration workers:					
Number.....	Number.....	4,430	3,268	6,436	8,690
Man-hours.....	Thousand.....	8,836	6,337	12,900	18,287
Wages.....	Thousand dollars...	22,659	14,158	24,127	10,274
Value added in mining.....	do.....	50,509	25,656	44,696	23,033
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	38,514	22,135	39,673	² 8,151
Contract work only.....	do.....	1,019	844	3,251	214
Cost of purchased machinery installed.....	do.....	2,456	1,290	3,064	(NA)
Value of shipments and receipts.....	do.....	85,628	44,958	81,073	38,131
Capital expenditures.....	do.....	5,851	4,123	6,360	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	235	(NA)	326	159

(NA) Not available.

¹Represents number of mines.²Excludes cost of minerals received for preparation.

Table 2.—GENERAL STATISTICS FOR THE LEAD AND ZINC ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	207	46	9,435	49,365	7,840	14,801	38,000	84,659	59,433	4,215	136,210	12,097	11,227	73,679
Northeast and North Central....	28	13	3,085	14,916	2,401	3,945	9,991	28,029	18,630	1,048	44,404	3,303	4,026	23,565
Kansas.....	5	-	50	187	42	80	154	319	273	105	592	105	(NA)	(NA)
South.....	37	11	1,553	7,784	1,267	2,611	6,028	13,994	10,145	1,189	22,575	2,753	1,624	8,029
East South Central (Tennessee) ² ...	9	8	914	5,125	766	1,622	4,126	9,564	5,734	872	13,855	2,315	844	(NA)
West.....	142	22	4,797	26,665	4,172	8,245	21,981	42,636	30,658	1,978	69,231	6,041	5,577	42,085
Idaho.....	29	4	1,726	9,870	1,467	2,955	7,939	14,218	5,001	199	18,494	924	1,946	11,701
Arizona.....	19	1	78	456	73	124	440	60	666	116	585	257	416	4,077
Utah.....	22	6	1,089	6,420	908	1,883	5,056	11,964	13,246	1,181	22,826	3,565	1,145	9,557

- Represents zero. (NA) Not available.

¹Excludes data for Alaska.²All in Zinc Ores Subindustry.

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Table 3A.—PRIMARY PRODUCTS OF THE LEAD AND ZINC ORES INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963					1958 ¹												
	Pro-duction (1,000 short tons)	Shipments including interplant transfers or receipts for milling			Gross quantity of metals contained ²					Pro-duction (1,000 short tons)	Shipments including interplant transfers or receipts for milling				Gross quantity of metals contained ²			
		Quantity (1,000 short tons)	Value (\$1,000)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Copper (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)	Quantity (1,000 short tons)		Value (\$1,000)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Copper (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)		
United States, total:																		
Production and shipments:																		
Crude ores mined in the lead and zinc ores industry, total.....	14,881	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	14,405	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
From underground operations.....	14,558	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	14,358	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
From open-pit operations.....	323	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	47	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mined in the lead ores subindustry.....	4,693	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	8,761	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Mined in the zinc ores subindustry.....	10,188	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	5,644	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to smelters.....	359	358	5,347	20,543	91,688	255	(³)	131	(X)	260	5,184	38,039	30,691	1,624	20.2	1,611	-	-
Ores and residues for shipment to mills.....	4,010	4,011	15,988	88,509	432,646	8,816	22.2	3,533	(X)	2,688	16,740	89,130	221,257	6,669	18.8	3,347	-	-
Lead concentrates ⁴	328	327	42,956	428,672	29,790	4,747	32.1	5,696	383	383	54,813	496,097	29,185	6,196	52.4	8,166	-	-
Zinc concentrates ⁴	883	881	62,108	21,377	1,015,827	3,366	95.1	2,156	758	753	42,679	28,834	864,198	5,255	12.3	2,128	-	-
Minerals milled in the lead and zinc ores industry:																		
Mined and milled at same establishment, total.....	9,845	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	11,927	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
In the lead ores subindustry.....	4,084	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	8,385	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
In the zinc ores subindustry.....	5,761	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	3,542	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Received from other establishments for milling.....	(X)	5,264	25,985	(NA)	(NA)	(NA)	(NA)	(NA)	(X)	2,924	21,517	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Northeast and North Central:																		
Production and shipments:																		
Crude ores mined in the lead and zinc ores industry.....	5,563	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	7,947	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to mills.....	672	672	1,789	5,340	99,899	-	-	-	(X)	983	2,284	3,248	57,104	1	-	(D)	(D)	(D)
Lead concentrates ⁴	117	117	15,702	171,520	141	-	-	168	164	164	23,562	237,715	15	406	-	235	-	-
Zinc concentrates ⁴	273	273	20,092	-	339,696	-	-	-	192	192	8,609	4,570	257,592	-	-	-	-	-
Minerals milled in the lead and zinc ores industry.....	5,330	(⁵)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	58,238	(⁵)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
South:																		
Production and shipments:																		
Crude ores mined in the lead and zinc ores industry.....	4,798	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	2,673	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to mills.....	1,659	1,659	3,532	6,302	116,424	-	-	-	(X)	908	2,021	7,468	44,768	-	(D)	(D)	(D)	(D)
Lead concentrates ⁴	13	12	1,262	18,606	220	-	-	(D)	12	12	1,514	17,289	640	-	-	-	-	-
Zinc concentrates ⁴	204	204	14,069	8,289	236,575	-	(D)	(D)	160	158	9,912	1,734	197,670	-	-	-	-	-
Minerals milled in the lead and zinc ores industry.....	5,294	(⁵)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	52,891	(⁵)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE LEAD AND ZINC ORES INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	1963										1958 ¹						
	Pro- duc- tion (1,000 short tons)	Shipments including interplant transfers or receipts for milling			Gross quantity of metals contained ²					Pro- duc- tion (1,000 short tons)	Shipments including interplant transfers or receipts for milling			Gross quantity of metals contained ²			
		Quantity (1,000 short tons)	Value (\$1,000)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Copper (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)	Quantity (1,000 short tons)		Value (\$1,000)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Copper (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)	
West:																	
Production and shipments:																	
Crude ores mined in the lead and zinc ores industry.....	4,520	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	3,785	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to mills.....	1,679	1,680	10,667	76,867	216,323	8,816	22.2	3,533	(X)	797	12,435	78,414	119,385	6,668	18.8	3,311	(NA)
Lead concentrates ⁴	198	198	25,992	238,546	29,429	4,747	32.1	5,526	207	207	29,737	241,093	28,530	5,790	52.4	7,93	(NA)
Zinc concentrates ⁴	406	404	27,947	13,088	439,556	3,366	9.4	2,031	406	403	24,158	22,530	408,936	5,255	12.3	2,128	(NA)
Minerals milled in the lead and zinc ores industry:																	
Mined and milled at same establishment.....	3,468	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	2,723	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Received from other establishments for milling.....	(X)	3,917	16,069	(NA)	(NA)	(NA)	(NA)	(NA)	(X)	999	17,045	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Idaho:																	
Production and shipments:																	
Crude ores mined in the lead and zinc ores industry.....	974	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	873	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to smelters.....	15	15	172	1,810	268	-	-	23	(X)	12	142	908	632	11	0.3	20	(NA)
Lead concentrates ⁴	81	81	11,068	105,422	13,909	-	-	2,532	73	73	11,542	94,167	11,586	560	1.2	3,668	(NA)
Zinc concentrates ⁴	98	98	6,700	4,731	105,462	-	(³)	388	74	74	3,923	3,732	75,468	67	0.8	315	(NA)
Minerals milled in the lead and zinc ores industry.....	957	-	-	(NA)	(NA)	(NA)	(NA)	(NA)	5853	(⁵)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Utah:																	
Production and shipments:																	
Crude ores mined in the lead and zinc ores industry.....	515	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	522	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Ores and residues for shipment to smelters.....	266	266	16,568	108,163	97,117	4,632	22.5	2,445	(X)	6522	69,058	680,181	687,803	64,552	626.2	61,769	(NA)
Lead and zinc concentrates ⁴									126	126	11,274	76,837	80,037	3,529	16.3	2,375	(NA)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Excludes data for Alaska.²Represents metal content of production where both production and shipments are shown.³Less than 500 ounces.⁴Represents net concentrates. Excludes concentrates transferred from one establishment to another within the Lead and Zinc Ores Industry for further treatment.⁵Minerals received from other establishments for milling are combined with minerals mined and milled at the same establishment.⁶Includes data for crude ores for shipment to mills.

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Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR LEAD AND ZINC ORES SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)¹

Product and year	Production	Unit value
Lead and zinc ores.....1963...	87	89
.....1958...	91	82
Crude ores and residues mined in the lead and zinc ores industry for shipment to smelters.....1963...	74	106
.....1958...	84	91
Lead concentrates.....1963...	71	80
.....1958...	84	86
Zinc concentrates.....1963...	114	97
.....1958...	102	75

¹Quantity figures used are based on metal content of ores and concentrates produced or shipped.

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1963 CENSUS OF MINERAL INDUSTRIES

INDUSTRY SERIES

Gold

SIC Codes 1042 and 1043

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Lode Gold Industry shipped products valued at \$26.6 million, a decrease of 10 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 8 percent from 1958 to a total of 2,386

employees in 1963. Value added in mining amounted to \$20.8 million in 1963, a decrease of 8 percent from 1958.

During 1963, establishments in the Placer Gold Industry shipped products valued at \$7.5 million, a decrease of 40 percent from 1958. Average employment in this industry showed a decrease of 58 percent from 1958 to a total of 356 employees in 1963. Value added in mining amounted to \$5.8 million in 1963, a decrease of 36 percent from 1958.

The Lode Gold Industry represents establishments primarily engaged in mining gold ores from

Table 1A.—GENERAL STATISTICS FOR THE LODE GOLD INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939 ²
Establishments:					
Total.....	Number.....	198	244	313	³ 872
With 20 employees or more.....	...do.....	5	12	15	(NA)
All employees:					
Number.....	Number.....	2,386	2,586	3,060	19,254
Payroll.....	Thousand dollars...	13,820	12,447	12,475	31,375
Production, development, and exploration workers:					
Number.....	Number.....	2,086	2,234	2,670	17,591
Man-hours.....	Thousand.....	4,536	4,602	5,988	41,522
Wages.....	Thousand dollars...	11,382	10,709	10,600	27,304
Value added in mining.....	...do.....	20,874	22,659	22,003	66,523
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	7,194	7,811	7,942	⁴ 19,541
Contract work only.....	...do.....	458	427	325	1,020
Cost of purchased machinery installed.....	...do.....	807	764	915	(NA)
Value of shipments and receipts.....	...do.....	26,630	29,506	28,677	92,942
Capital expenditures.....	...do.....	2,245	1,728	2,183	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	89	(NA)	135	291

(NA) Not available.

¹Excludes data for 7 establishments in Alaska with total employment in the range 0-4.

²Excludes data for Alaska. The Bureau of Mines, U.S. Department of the Interior, indicates that the value of gold and silver produced in Alaska in 1939 from dry and siliceous ore was \$7,400 thousand.

³Represents number of mines.

⁴Excludes cost of minerals received for preparation.

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lode deposits. In addition to ore dressing methods such as crushing, grinding, gravity concentration, and froth flotation, this industry includes amalgamation, cyanidation, and the production of bullion at the mine or mill site.

The Placer Gold Industry represents establishments primarily engaged in recovery of gold from placer deposits by any method. This industry includes the production of bullion at the mine, mill, or dredge site.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers, based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent averages of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in

the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing. The total value of shipments and other receipts of establishments classified in the Lode Gold Industry amounted to \$26.6 million in 1963 of which about 99 percent represented products primary to this industry. For the Placer Gold Industry, value of shipments and receipts amounted to \$7.5 million in 1963 of which about 90 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure appears in table 3A. In 1963, the value of gross shipments of primary products of the Lode Gold Industry shipped by that industry amounted to over 98 percent of the shipments of such products by all producers. All placer gold was shipped by the Placer Gold Industry in 1963.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries. These are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken

into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during

the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE PLACER GOLD INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939 ¹
Establishments:					
Total.....	Number.....	157	165	281	² 340
With 20 employees or more.....	...do.....	2	6	7	(NA)
All employees:					
Number.....	Number.....	356	840	1,320	3,705
Payroll.....	Thousand dollars...	2,214	5,013	6,749	6,794
Production, development, and exploration workers:					
Number.....	Number.....	320	753	1,152	3,228
Man-hours.....	Thousand.....	723	1,882	3,010	8,088
Wages.....	Thousand dollars...	1,772	4,204	5,642	5,632
Value added in mining.....	...do.....	5,794	9,123	10,306	21,935
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	2,339	3,816	5,153	³ 6,092
Contract work only.....	...do.....	343	247	111	141
Cost of purchased machinery installed.....	...do.....	372	617	665	(NA)
Value of shipments and receipts.....	...do.....	7,515	12,628	14,781	28,027
Capital expenditures.....	...do.....	990	928	1,343	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	79	(NA)	149	110

(NA) Not available.

¹Excludes data for Alaska. The Bureau of Mines, U.S. Department of the Interior, indicates that the value of placer gold and silver produced in Alaska in 1939 was \$16,411 thousand.

²Represents number of mines.

³Excludes cost of minerals received for preparation, if any.

Table 2.—GENERAL STATISTICS FOR THE PLACER GOLD INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	157	2	356	2,214	320	723	1,772	5,794	2,339	372	7,515	990	840	9,123
West.....	157	2	356	2,214	320	723	1,772	5,794	2,339	372	7,515	990	(NA)	(NA)
Pacific.....	122	2	341	2,172	305	687	1,720	5,744	2,284	209	7,476	761	(NA)	(NA)

(NA) Not available.

Table 3A.—PRIMARY PRODUCTS OF THE GOLD INDUSTRIES IN THE UNITED STATES PRODUCED IN ALL INDUSTRIES: 1963 AND 1958

Product and geographic area	Production	Shipments including interplant transfers or receipts for milling		Gross quantity of metals contained				
	(1,000 short tons)	Quantity (1,000 short tons)	Value (\$1,000)	Copper (1,000 pounds)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)
	1963							
LODE GOLD ¹								
Production and shipments:								
Crude ores mined in the lode gold industry.....	2,510	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to smelters.....	25	25	316	-	6	6	5.8	27
For shipment to mills.....	(X)	-	-	-	-	-	-	-
Gold concentrates, mill bullion, and precipitates...	(X)	(X)	26,321	-	-	-	742.2	338
Minerals milled in the lode gold industry.....	2,116	-	-	(NA)	(NA)	(NA)	(NA)	(NA)
PLACER GOLD								
Production and shipments:								
Placer gold.....	³ 193.1	³ 193.0	6,768	(X)	(X)	(X)	193.0	(X)
Placer silver.....	³ 17	³ 17	20	(X)	(X)	(X)	(X)	17
Gravel washed in the placer gold industry to recover placer gold and silver.....	⁴ 23,774	(X)	(X)	(X)	(X)	(X)	(NA)	(NA)
	1958							
LODE GOLD ¹								
Production and shipments:								
Crude ores mined in the lode gold industry.....	2,358	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to smelters.....	(X)	92	1,192	2,776	199	485	45.9	932
For shipment to mills.....	(X)	92	1,272	44	(D)	(D)	43.1	51
Gold concentrates, mill bullion, and precipitates...	(X)	(X)	27,880	1,222	653	1,132	771.7	1,002
Minerals milled in the lode gold industry.....	² 2,288	(²)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)
PLACER GOLD								
Production and shipments:								
Placer gold.....	³ 362.1	³ 362.5	12,580	(X)	(X)	(X)	362.5	(X)
Placer silver.....	³ 51	³ 51	41	(X)	(X)	(X)	(X)	51
Gravel washed in the placer gold industry to recover placer gold and silver.....	⁴ 46,056	(X)	(X)	(X)	(X)	(X)	(NA)	(NA)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹For 1958, excludes data for Alaska where less than 40 tons were reported mined and 44 tons of crude ore and residues and less than 2 tons of concentrates from mill clean-up were shipped, containing a total of 174 ounces of gold and 20 ounces of silver.

²Minerals received from other establishments for milling are combined with minerals mined and milled at the same establishment.

³Represents thousands of fine ounces.

⁴Represents thousands of cubic yards.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR LODE AND PLACER GOLD SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
Lode gold ¹.....1963...	94	102
.....1958...	115	96
Crude ore and residues mined in the lode gold industry for shipment to smelters.....1963...	21	196
.....1958...	334	47
Gold concentrates, mill bullion, and precipitates.....1963...	97	102
.....1958...	106	98
Placer gold ¹.....1963...	46	101
.....1958...	87	100

¹The quantity used in measuring production is based on the quantity of metals contained in ores, residues, concentrates, bullion, and precipitates.

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-10C-4



INDUSTRY SERIES

Silver ores

SIC Code 1044

**preliminary
report**

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Silver Ores Industry shipped products valued at \$26.0 million, an increase of 107 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an

increase of 48 percent from 1958 to a total of 1.5 thousand employees in 1963. Value added in mining amounted to \$21.9 million in 1963, an increase of 111 percent from 1958.

The Silver Ores Industry represents establishments primarily engaged in mining, milling, or otherwise preparing silver ores. The production of bullion at the mine or mill site is included.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments

Table 1.—GENERAL STATISTICS FOR THE SILVER ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	110	61	101	¹ 166
With 20 employees or more.....	do.....	8	5	3	(NA)
All employees:					
Number.....	Number.....	1,466	989	1,255	4,627
Payroll.....	Thousand dollars...	8,844	5,757	6,038	6,919
Production, development, and exploration workers:					
Number.....	Number.....	1,172	854	1,065	4,256
Man-hours.....	Thousand.....	2,337	1,746	2,214	9,055
Wages.....	Thousand dollars...	6,848	4,840	5,003	6,017
Value added in mining.....	do.....	21,872	10,364	9,856	16,340
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	6,333	3,048	2,912	² 3,376
Contract work only.....	do.....	463	153	364	120
Cost of purchased machinery installed.....	do.....	1,178	301	446	(NA)
Value of shipments and receipts.....	do.....	26,027	12,557	12,148	21,292
Value of net shipments and receipts.....	do.....	26,027	12,421	12,051	19,716
Capital expenditures.....	do.....	3,356	1,156	1,066	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	55	(NA)	36	44

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

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for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent averages of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Silver Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing. However, the total value of shipments and other receipts of establishments classified in the Silver Ores Industry amounted to \$26 million in 1963 of which about 91 percent represented products primary to this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure appears in table 3A. In 1963, the value of gross shipments of primary products of the Silver Ores Industry shipped by that industry amounted to about 91 percent of the shipments of such products shipped by all producers.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. However, during 1963 there were no transfers of ores produced in the Silver Ores Industry to other establishments for milling.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries. These are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value

added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE SILVER ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States.	110	8	1,466	8,844	1,172	2,337	6,848	21,872	6,333	1,178	26,027	3,356	989	10,364
Mountain.....	97	8	1,414	8,561	1,153	2,314	6,797	21,675	6,258	1,096	25,945	3,084	(NA)	(NA)
Idaho.....	17	5	966	5,871	825	1,568	4,760	17,061	4,216	249	20,519	1,007	878	9,588

(NA) Not available.

Table 3A.—PRIMARY PRODUCTS OF THE SILVER ORES INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	Production (1,000 short tons)	Shipments including interplant transfers or receipts for milling		Gross quantity of metals contained ¹				
		Quantity (1,000 short tons)	Value (\$1,000)	Copper (1,000 pounds)	Lead (1,000 pounds)	Zinc (1,000 pounds)	Gold (1,000 fine ounces)	Silver (1,000 fine ounces)
1963								
United States:								
Production and shipments:								
Crude ore mined in the silver ores industry, total.....	912	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore mined:								
From underground operations.....	839	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
From open-pit operations.....	73	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to smelters.....	123	123	1,353	1,366	474	140	4.0	1,117
For shipment to mills.....	-	-	-	-	-	-	-	-
Silver concentrates and silver mill bullion.....	264	264	24,598	28,770	256,454	24,334	18.9	15,093
Minerals milled in the silver ores industry.....	3816	(3)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)
Idaho:								
Production and shipments:								
Crude ore mined in the silver ores industry.....	507	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues for shipment to smelters.....	49	49	20,926	6,636	(D)	(D)	(D)	13,709
Silver concentrates and silver mill bullion.....								
Minerals milled in the silver ores industry.....	3501	(3)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)
Other States:								
Production and shipments:								
Crude ore mined in the silver ores industry.....	405	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to mills.....	-	-	-	-	-	-	-	-
For shipment to smelters.....	2138	2138	5,025	23,500	(D)	(D)	(D)	2,501
Silver concentrates and silver mill bullion.....								
Minerals milled in the silver ores industry.....	315	-	-	(NA)	(NA)	(NA)	(NA)	(NA)
1958								
United States:								
Production and shipments:								
Crude ore mined in the silver ores industry, total.....	496	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore mined:								
From underground operations.....	454	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
From open-pit operations.....	42	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to smelters.....	(NA)	102	1,419	2,985	1,204	247	7.0	1,383
For shipment to mills.....	(NA)	8	136	45	370	341	0.8	67
Silver concentrates and silver mill bullion.....	221	221	11,674	26,496	25,261	2392	1.4	11,851
Minerals milled in the silver ores industry.....	3459	(3)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)
Idaho:								
Production and shipments:								
Crude ore mined in the silver ores industry.....	440	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues for shipment to smelters.....	(X)	16	11,681	6,476	5,272	401	2.1	11,861
Silver concentrates and silver mill bullion.....	21	21						
Minerals milled in the silver ores industry.....	424	-	-	(NA)	(NA)	(NA)	(NA)	(NA)
Other States:								
Production and shipments:								
Crude ore mined in the silver ores industry.....	56	(X)	(X)	(NA)	(NA)	(NA)	(NA)	(NA)
Ore and residues:								
For shipment to mills.....	(NA)	8	136	45	370	341	0.8	67
For shipment to smelters.....	(NA)	86	1,412	3,005	1,193	238	6.3	1,373
Silver concentrates and silver mill bullion.....	(4)	(4)						
Minerals milled in the silver ores industry.....	335	(3)	(D)	(NA)	(NA)	(NA)	(NA)	(NA)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Represents metal content of production where both production and shipments are shown.

²Represents concentrates only.

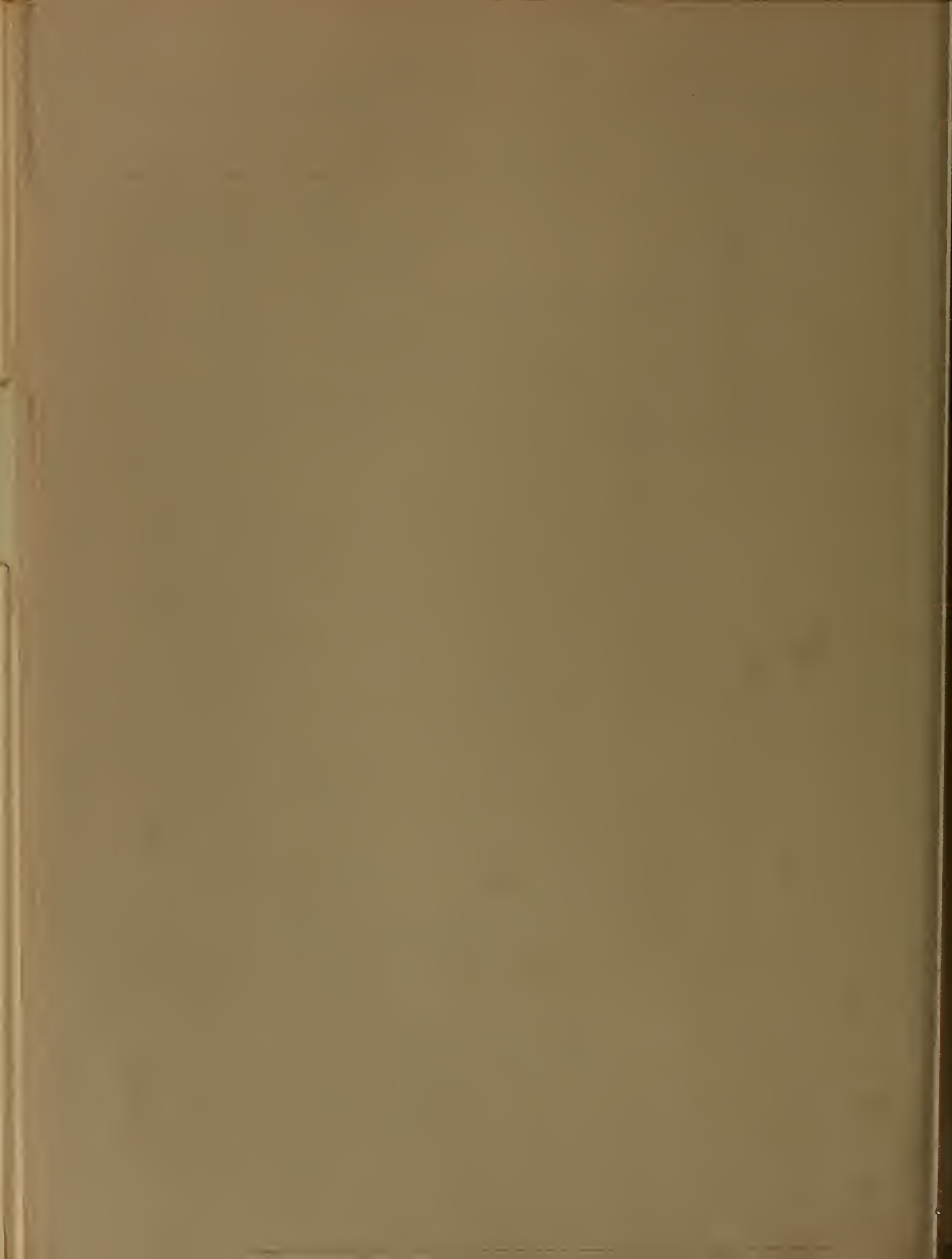
³Minerals received from other establishments for milling are combined with minerals mined and milled at the same establishment.

⁴Less than 500 tons.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR SILVER ORES SHIPPED BY ALL PRODUCERS
IN THE UNITED STATES: 1963 AND 1958(Indexes 1954 = 100)¹

Product code	Product and year	Production	Unit value
1044	Silver ores.....1963...	179	121
	.....1958...	114	97
	Crude ores and residues mined in the silver		
	ores industry for shipment to smelters.....1963...	134	173
	.....1958...	200	121
	Silver concentrates and silver mill bullion...1963...	183	119
	.....1958...	107	96

¹The production used in the indexes is based on the metal content of ores, concentrates, and mill bullion produced or shipped.



PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-10D-1

INDUSTRY SERIES

preliminary
report

Bauxite

SIC Code 1051

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Bauxite Industry shipped products valued at \$21.5 million, an increase of 18 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed a decrease of 21 percent from 1958 to a total of 554 employees in 1963. Value added in mining amounted to \$17.5 million in 1963, an increase of 13 percent from 1958.

The Bauxite and Other Aluminum Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing bauxite and other aluminum ores. (Bauxite was the only aluminum ore produced in both 1958 and 1963.) Associated activities such as drying, calcining, activating, and sintering are also included.

Table 1.—GENERAL STATISTICS FOR THE BAUXITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	18	29	25	¹ 16
With 20 employees or more.....	.....do.....	4	9	6	(NA)
All employees:					
Number.....	Number.....	554	705	852	827
Payroll.....	Thousand dollars...	3,416	3,606	3,581	819
Production and development workers:					
Number.....	Number.....	415	502	661	727
Man-hours.....	Thousand.....	721	905	1,288	1,176
Wages.....	Thousand dollars...	2,257	2,290	2,529	578
Value added in mining.....	.....do.....	17,484	15,430	12,827	1,965
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	.....do.....	3,839	2,669	3,946	² 562
Minerals received for preparation only.....	.....do.....	1,468	1,066	1,181	(NA)
Contract work only.....	.....do.....	1,228	445	1,603	46
Cost of purchased machinery installed.....	.....do.....	462	1,483	356	(NA)
Value of shipments and receipts.....	.....do.....	21,517	18,174	16,819	(NA)
Value of net shipments and receipts.....	.....do.....	20,656	17,374	16,029	2,527
Capital expenditures.....	.....do.....	268	1,408	310	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	28	(NA)	49	13

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

December 1964

U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll period ended nearest the 15th of March, May, August, and November plus the number of all other employees about March 15. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, materials, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing

the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Bauxite Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, of the total value of shipments and other receipts of establishments classified in the Bauxite Industry, amounting to \$21.5 million, approximately 99 percent represented products primary to that industry. Less than 500 tons of bauxite were produced in other industries, and there were no shipments from such industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Net shipments for the Bauxite Industry in 1958 amounted to \$20.7 million. Wherever value of shipments is shown without further specification, it represents gross shipments.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and

"value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry reports, final summary reports, and area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE BAUXITE INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Industry, region, and State	1963											1958		
	Establish- ments, number		All employees		Production and development workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital ex- pendi- tures (\$1,000)	All em- ploy- ees, number	Value added in mining (\$1,000)
	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Man- hours (1,000)	Wages (\$1,000)							
United States, total.	18	4	554	3,416	415	721	2,257	17,484	3,839	462	21,517	268	705	15,430
West South Central (Arkansas).....	9	4	490	3,155	369	663	2,103	16,742	3,224	396	20,168	194	632	15,023
Other States ¹	9	-	64	261	46	58	154	742	615	66	1,349	74	73	407

- Represents zero.

¹Represents Georgia and Alabama.

Table 3.—PRIMARY PRODUCTS OF THE BAUXITE INDUSTRY IN THE UNITED STATES: 1963 AND 1958

Item	1963				1958			
	Production (1,000 long tons)	Shipments including interplant transfers or receipts			Production (1,000 long tons)	Shipments including interplant transfers or receipts		
		Quantity (1,000 long tons)	Dried bauxite equivalent (1,000 long tons)	Value (\$1,000)		Quantity (1,000 long tons)	Dried bauxite equivalent (1,000 long tons)	Value (\$1,000)
Production and shipments of bauxite:								
Crude (undried) bauxite—								
Mined.....	1,827	(X)	(X)	(X)	1,612	(X)	(X)	(X)
Shipped to preparation plants.....	(X)	201	121	(¹)	(X)	143	117	800
Shipped to consumers.....	(X)	1,765	1,418	20,478	(X)	1,519	1,259	14,807
Treated bauxite, total.....	(D)				136	137	161	2,548
Dried.....	59	59	59	674	92	93	93	1,047
Calcined and activated.....	(D)	(D)	(D)	(D)	44	44	68	1,501

D Withheld to avoid disclosing figures for individual companies. X Not applicable.

¹Not shown to avoid disclosing figures for kaolin shipped as a secondary product by 4 bauxite establishments.

U.S. DEPARTMENT OF COMMERCE
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1963 CENSUS OF MINERAL INDUSTRIES

INDUSTRY SERIES

Manganese ores SIC Code 1062

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Manganese Ores Industry shipped products valued at \$7.2 million, a decrease of 82 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 89 percent from 1958 to a total of 224 employees in 1963. Value added by

mining amounted to \$2.4 million in 1963, a decrease of 88 percent from 1958.

The Manganese Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing manganese ores, such as pyrolusite, rhodochrosite, psilomelane, and manganite. The mining of manganiferous ores valued chiefly for their iron content is classified in Industry 1011, Iron Ores. The industry includes treatment plants primarily engaged in processing imported ores.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The

Table 1.—GENERAL STATISTICS FOR THE MANGANESE ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	17	186	367	¹ 34
With 20 employees or more.....	do.....	5	22	24	(NA)
All employees:					
Number.....	do.....	224	2,099	2,604	545
Payroll.....	Thousand dollars....	1,138	9,036	9,292	566
Production and development workers:					
Number.....	Number.....	180	1,792	2,266	504
Man-hours.....	Thousand.....	355	3,475	4,293	959
Wages.....	Thousand dollars....	818	7,244	7,643	483
Value added in mining.....	do.....	2,352	20,014	18,118	707
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	5,085	20,476	15,240	² 238
Minerals received for preparation only.....	do.....	4,424	10,675	5,382	(NA)
Cost of purchased machinery installed.....	do.....	175	1,085	2,304	(NA)
Value of shipments and receipts.....	do.....	7,227	39,385	32,398	(NA)
Value of net shipments and receipts.....	do.....	2,803	34,330	27,016	945
Capital expenditures.....	do.....	385	2,190	3,264	(NA)
Horsepower rating of power equipment.....	Thousand horsepower..	22	(NA)	106	5

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

January 1965

U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all employees for the payroll period ended nearest the 15th of March; for 1954, they represent an average of all employees for the payroll period ended nearest the 15th of March, May, August, and November. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of other workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, products resold, supplies, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Manganese Ores Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, of the total value of shipments and other receipts of establishments classified in the Manganese Ores Industry, amounting to \$7.2 million, over 98 percent represented products primary to that industry. No such ores or concentrates were produced in other industries in 1963.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Manganese Ores Industry in 1963 was \$7.2 million and the value of net shipments and receipts was \$2.8 million.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in table 1 is reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (table 1) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry reports, final summary reports, and area reports will be published during the second half

of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the

year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7". Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE MANGANESE ORES INDUSTRY BY REGIONS AND STATES: 1963 AND 1958

(Not applicable for this industry.)

Table 3.—PRIMARY PRODUCTS OF THE MANGANESE ORES INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

(Excludes ferruginous manganese and manganiferous iron ores valued chiefly for their iron content. These are classified as primary to the Iron Ores Industry)

Item	1963			1958		
	Production (1,000 long tons)	Shipments including interplant transfers or receipts		Production (1,000 long tons)	Shipments including interplant transfers or receipts	
		Quantity (1,000 long tons)	Value (\$1,000)		Quantity (1,000 long tons)	Value (\$1,000)
Production and shipments:						
Crude manganese ores.....	55	(D)	(D)	1,395	508	17,448
Manganese treated ores, nodules, and sinter (including washed material), total	70	89	6,752	333	321	20,383
Containing less than 35 percent manganese.....	70	89	6,752	9	9	286
Containing 35 percent or more manganese }				324	312	20,097
Manganese crude and treated ores prepared:						
Produced and prepared at same establish- ment.....	(D)	xxx	xxx	1,061	xxx	xxx
Received from other establishments for preparation.....	xxx	62	4,424	xxx	493	10,675

D Withheld to avoid disclosing figures for individual companies.

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WASHINGTON, D.C. 20233

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1963 CENSUS OF MINERAL INDUSTRIES

MC63(P)-10D-3

INDUSTRY SERIES

Tungsten ores and Miscellaneous ferroalloy ores

SIC Codes 1064 and 1069

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Tungsten Ores and Miscellaneous Ferroalloy Ores Industries shipped products valued at \$82.6 million, an increase of 14 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in these industries showed a decrease of 16 percent from 1958 to a total of 2.8

GENERAL STATISTICS FOR THE TUNGSTEN ORES AND MISCELLANEOUS FERROALLOY ORES INDUSTRIES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958			1954			1939		
			Total	Tungsten ores ¹	Miscellaneous ferroalloy ores ²	Total	Tungsten ores ³	Miscellaneous ferroalloy ores ⁴	Total	Tungsten ores	Miscellaneous ferroalloy ores
Establishments:											
Total.....	Number.....	39	108	32	76	719	549	170	⁵ 69	⁵ 53	⁵ 16
With 20 employees or more.....	...do.....	5	11	4	7	27	20	7	(NA)	(NA)	(NA)
All employees:											
Number.....	Number.....	2,817	3,339	638	2,701	5,474	2,987	2,487	1,948	844	1,104
Payroll.....	Thousand dollars	18,892	17,675	2,907	14,768	29,243	14,758	14,485	3,428	1,368	2,060
Production, development, and exploration workers:											
Number.....	Number.....	2,362	2,588	508	2,080	4,572	2,635	1,937	1,664	701	963
Man-hours.....	Thousand.....	4,349	4,860	977	3,883	10,829	6,327	4,502	3,727	1,639	2,088
Wages.....	Thousand dollars	13,971	12,211	1,993	10,218	23,687	13,148	10,539	2,613	1,114	1,499
Value added in mining.....	...do.....	64,891	54,241	8,164	46,077	89,281	40,744	48,537	15,698	2,427	13,271
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	23,588	21,177	6,290	14,887	38,076	22,757	15,319	⁶ 3,114	⁶ 927	⁶ 2,187
Contract work only.....	...do.....	3,551	3,725	7	3,718	5,244	1,885	3,359	98	55	43
Cost of purchased machinery installed....	...do.....	1,309	1,073	98	975	6,171	3,562	2,609	(NA)	(NA)	(NA)
Value of shipments and receipts.....	...do.....	82,563	72,136	14,430	57,706	121,273	60,737	60,536	⁷ 18,812	⁷ 3,354	⁷ 15,458
Capital expenditures.....	...do.....	7,225	4,355	122	4,233	12,255	6,326	5,929	(NA)	(NA)	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	133	(NA)	(NA)	(NA)	263	156	107	51	15	36

(NA) Not available.

¹Excludes data for one nonproducing establishment in Alaska with capital expenditures of between \$10 thousand and \$20 thousand.

²Excludes data for 2 nonproducing establishments in Alaska with capital expenditures between \$200 thousand and \$400 thousand.

³Excludes data for one establishment in Alaska with no employees.

⁴Excludes data for two establishments in Alaska, one with 10-19 employees and one with no employees.

⁵Represents number of mines.

⁶Excludes cost of minerals received for preparation.

⁷Represents value of net production and receipts.

May 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



thousand employees in 1963. Value added in mining amounted to \$64.9 million in 1963, an increase of 20 percent from 1958.

The Tungsten Ores Industry represents establishments primarily engaged in mining, milling, or otherwise preparing tungsten ores, such as ferberite, huebnerite, scheelite, and wolframite. The Miscellaneous Ferroalloy Ores, except Vanadium, N.E.C. Industry represents establishments primarily engaged in mining, milling, or otherwise preparing ferroalloy ores, n.e.c., such as chromite, columbite, and nickel ore. The principal products of this industry in 1963 were molybdenum, nickel, and cobalt ores. Titanium ore, used sometimes for ferroalloying but principally for other purposes, is classified in Industry 1093.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments of establishments classified in the Tungsten and Miscellaneous Ferroalloy Ores Industries amounted to \$82.6 million. Of this total, less than \$2 million were products primary to other industries; and there were no receipts for miscellaneous activities.

The total value of shipments for these industries (i.e., the total value of receipts of establishments classified in the industries) should be clearly distinguished from the total value of primary products of the industries shipped by all producers which was \$102.9 million. About 21 percent of this total represented shipments by establishments classified in other industries.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for these industries will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the

various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

U.S. DEPARTMENT OF COMMERCE
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OFFICIAL BUSINESS

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U.S. DEPARTMENT OF COMMERCE

1963 CENSUS OF MINERAL INDUSTRIES

MICS(P)-10E-1

INDUSTRY SERIES

preliminary
report

Metal mining services

SIC Code 1081

1963 CENSUS OF MINERAL INDUSTRIES

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Metal Mining Services Industry performed services valued at \$29.1 million, a decrease of 10 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed a decrease of 4 percent from 1958 to a total of 2,087 employees in 1963. Value added in mining amounted to \$22.8 million in 1963, a decrease of less than one percent from 1958.

The Metal Mining Services Industry represents establishments engaged primarily in performing metal mining services for others on a contract, fee, or other basis. Included are services such as mine exploration, prospect drilling, mine development, test drilling, overburden stripping, and strip mining.

Table 1.—GENERAL STATISTICS FOR THE METAL MINING SERVICES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments;					
Total.....	Number.....	83	95	114	69
With 20 employees or more.....	...do.....	14	23	26	(NA)
All employees:					
Number.....	Number.....	2,087	2,184	3,059	695
Payroll.....	Thousand dollars...	12,566	12,097	15,268	985
Production, development, and exploration workers:					
Number.....	Number.....	1,789	1,973	2,863	637
Man-hours.....	Thousand.....	3,642	4,274	6,519	1,344
Wages.....	Thousand dollars...	10,192	10,624	13,933	853
Value added in mining.....	...do.....	22,818	22,862	26,703	1,822
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	6,430	9,420	12,327	¹ 546
Cost of purchased machinery installed.....	...do.....	2,851	1,365	2,049	(NA)
Value of shipments and receipts.....	...do.....	29,091	32,384	38,679	2,368
Capital expenditures.....	...do.....	3,008	1,263	2,400	47
Horsepower rating of power equipment.....	Thousand horsepower.....	167	(NA)	152	23

(NA) Not available.

¹Excludes cost of subcontract work.

June 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service establishments in this industry. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a report for each establishment. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size. Mining service establishments, however, were permitted to file one report for all mining services performed in the United States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries or

geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The total receipts for services reported by establishments classified in the Metal Mining Services Industry consists not only of receipts for services described above as primary to the industry, but also of the value of secondary services, such as hauling (which are primary in other industries). However, the total receipts of establishments classified in the Metal Mining Services Industry amounted to \$29.1 million of which less than \$2 million represented services primary to other industries.

The total receipts for the industry, which are the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total receipts for primary services of the industry by all service establishments. Such figures are shown in table 3. However, for 1963, receipts for services primary to this industry reported by establishments classified in other industries amounted to less than one percent of the total of \$27.2 million shown for such services.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the primary services of this industry performed by all mineral services industries.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other mineral industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

1963 CENSUS OF MINERAL INDUSTRIES

3

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority

of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE METAL MINING SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all mining services performed in the United States. These reports were classified on the basis of the principal kind of work and the principal State in which the service was performed)

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and sub-contract work	Purchased machinery installed	Receipts for services and shipments	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 or more employees	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	83	14	2,087	12,566	1,789	3,642	10,192	22,818	6,430	2,851	29,091	3,008	2,184	22,862
Northeast and East North Central.....	6	2	75	536	57	123	391	720	269	7	989	7	321	2,656
West North Central... Minnesota.....	15	2	299	1,508	260	482	1,266	2,859	635	298	3,485	307	159	1,437
	5	2	273	1,429	236	448	1,192	2,705	570	288	3,275	288	118	1,104
South.....	9	2	90	376	82	163	343	895	265	86	1,151	95	264	2,230
West.....	53	8	1,623	10,146	1,390	2,874	8,192	18,344	5,261	2,460	23,466	2,599	1,440	16,539
Mountain.....	45	8	1,597	9,962	1,378	2,852	8,149	18,242	5,227	2,460	23,341	2,588	1,341	15,329
Colorado.....	13	1	98	412	91	143	368	1,992	280	30	2,282	20	317	2,773
Arizona.....	9	3	1,033	6,903	922	1,959	5,954	12,254	3,385	2,258	15,625	2,272	278	3,789
Utah.....	6	1	184	1,248	108	196	658	1,383	680	30	2,049	44	283	2,787
Nevada.....	7	2	226	1,100	205	462	895	2,038	657	109	2,662	142	118	1,741

Table 3.—PRIMARY PRODUCTS OF THE METAL MINING SERVICES INDUSTRY PERFORMED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all mining services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. Separate data were contained in these reports for the various kinds of work performed)

Type of service and geographic area	Total receipts for services (\$1,000)	
	1963	1958
United States, total.....	27,157	32,263
Exploration work, including geophysical and other exploratory surveying.....	7,931	2,215
Prospect and test drilling.....	7,527	11,523
Other drilling, including blasting ¹	252	621
Sinking mine shafts and driving mine tunnels.....	3,173	7,018
Stripping overburden.....	6,574	5,128
Mining minerals for others.....	1,700	25,758
East and South.....	5,034	9,920
Prospect and test drilling.....	2,962	4,232
West.....	22,123	22,343
Exploration work, including geophysical and other exploratory surveying.....	7,849	(NA)
Prospect and test drilling.....	4,565	7,291
Arizona.....	14,735	(NA)

(NA) Not available.

¹Includes figures for "Other services."

²Represents strip mining minerals for others only.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-10E-2

INDUSTRY SERIES

preliminary
report

Titanium ores

SIC Code 1093

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Titanium Ores Industry shipped products valued at \$22.0 million, an increase of 28 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed an increase of 4 percent from 1958 to a total of 997 employees in 1963. Value added in mining amounted to \$15.0 million in 1963, an increase of 18 percent from 1958.

The Titanium Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing titanium ores such as ilmenite and rutile ores.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mineral establishments. The

Table 1.—GENERAL STATISTICS FOR THE TITANIUM ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	8	11	10	¹ 3
With 20 employees or more.....	...do.....	7	7	6	(NA)
All employees:					
Number.....	Number.....	997	962	843	196
Payroll.....	Thousand dollars...	6,401	4,496	3,699	182
Production, development, and exploration workers:					
Number.....	Number.....	846	706	568	183
Man-hours.....	Thousand.....	1,721	1,234	1,261	322
Wages.....	Thousand dollars...	5,131	2,882	2,397	140
Value added in mining.....	...do.....	15,012	12,746	11,134	370
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	7,087	5,064	4,328	² 88
Contract work only.....	...do.....	1,480	121	335	-
Cost of purchased machinery installed.....	...do.....	2,105	1,831	1,286	(NA)
Value of shipments and receipts.....	...do.....	22,033	17,158	12,750	³ 458
Capital expenditures.....	...do.....	2,171	2,483	3,998	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	54	(NA)	46	2

- Represents zero. (NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Titanium Ores Industry consists not only of products described above as primary to

the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Titanium Ores Industry amounted to \$22 million in 1963. Of this total, about \$6 million represented products primary to other industries.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, of the total value of titanium concentrates shipped by all industries, amounting to \$16.8 million in 1963, less than 5 percent represented shipments by industries other than Titanium Ores.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (table 1) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE TITANIUM ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Preliminary State and regional detail not available without further review)

Table 3.—PRIMARY PRODUCTS OF THE TITANIUM ORES INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Item	Unit of measure	1963			1958		
		Production	Total shipments including interplant transfers		Production	Total shipments including interplant transfers	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
United States:							
Production and shipments:							
Crude titanium ores mined.....	1,000 short tons	25,790	-	-	13,244	-	-
Titanium concentrates, total.....	Short tons.....	901,250	902,170	16,836	605,522	597,523	12,365
Ilmenite concentrates.....	...do.....	888,883	889,369	15,583	595,265	591,464	11,590
Rutile concentrates.....	...do.....	12,367	12,801	1,253	10,257	6,059	775
Minerals prepared.....	1,000 short tons	¹ 23,071	(¹)	(D)	¹ 13,169	(¹)	(D)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies.

¹The figures for minerals received from other establishments for preparation are combined with those for minerals produced and prepared in the same establishment.

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OFFICIAL BUSINESS

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1963 CENSUS OF MINERAL INDUSTRIES

MI63(P)-10E-3

INDUSTRY SERIES

**preliminary
report**

Uranium-radium-vanadium ores

SIC Code 1094

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Uranium-Radium-Vanadium Ores Industry shipped products valued at \$325.6 million, a decrease of 3 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this

industry showed a decrease of 8 percent from 1958 to a total of 7,282 employees in 1963. Value added by mining amounted to \$188.5 million in 1963, an increase of 8 percent from 1958.

The Uranium-Radium-Vanadium Ores Industry represents establishments engaged primarily in mining, milling, or otherwise preparing uranium-radium-vanadium ores.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments.

Table 1.—GENERAL STATISTICS FOR THE URANIUM-RADIUM-VANADIUM ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939
Establishments:					
Total.....	Number.....	337	602	637	28
With 20 employees or more.....	..do.....	51	61	26	(NA)
All employees:					
Number.....	Number.....	7,282	7,939	3,467	441
Payroll.....	Thousand dollars...	51,698	44,422	14,568	609
Production, development, and exploration workers:					
Number.....	Number.....	5,139	6,389	2,944	378
Man-hours.....	Thousand.....	11,353	13,873	6,227	879
Wages.....	Thousand dollars...	34,291	34,439	11,908	497
Value added in mining.....	..do.....	188,495	174,802	(³)	1,043
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	..do.....	144,279	243,122	⁴ 20,074	⁴ 429
Minerals received for preparation only.....	..do.....	77,322	109,452	(³)	(NA)
Contract work only.....	..do.....	13,536	69,613	7,462	45
Cost of purchased machinery installed.....	..do.....	8,575	20,092	5,336	(NA)
Value of shipments and receipts.....	..do.....	325,569	336,451	(³)	(NA)
Value of net shipments and receipts.....	..do.....	248,247	226,999	(³)	1,472
Capital expenditures.....	..do.....	15,780	101,565	14,793	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	386	(NA)	165	7

(NA) Not available.

¹Excludes data for one establishment with less than five employees engaged in exploration and development work in Alaska.

²Represents number of mines.

³Figures for quantity of ores and concentrates, value of shipments, and cost of minerals received for preparation were not collected in the 1954 Census. However, on the basis of figures in the 1959 Minerals Year Book (United States Department of the Interior, Bureau of Mines), it was estimated that the value of shipments and receipts of the Uranium-Radium-Vanadium Ores Industry in 1954 was between \$70 and \$90 million, that the value of net shipments and receipts was between \$30 and \$50 million, that value added in mining was between \$20 and \$40 million, and that cost of minerals received for preparation was between \$30 and \$50 million.

⁴Excludes cost of minerals received for preparation.

April 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditure less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from year to year.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in Uranium-Radium-Vanadium Ores

Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and products purchased and resold without further processing at the establishments. The total value of shipments and other receipts of establishments classified in the Uranium-Radium-Vanadium Ores Industry in 1963 amounted to \$325.6 million. Of this total, less than 3 percent represented products primary to other industries and receipts for miscellaneous activities.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, this table indicates that the total value of shipments of uranium-vanadium ores and concentrates in 1963 was \$318.3 million, all of which were shipped by establishments classified in the Uranium-Radium-Vanadium Ores Industry.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Uranium-Radium-Vanadium Ores Industry in 1963 was \$325.6 million and the value of net shipments and receipts was \$248.2 million.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in table 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (table 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and

for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United

States. The first minerals census covered the year 1840. For 1963, it was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE URANIUM-RADIUM-VANADIUM ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States.	337	51	7,282	51,698	5,139	11,353	34,291	188,495	144,279	8,575	325,569	15,780	17,939	1174,802
Alaska.....	291	48	6,551	44,893	4,946	10,945	33,254	180,512	135,924	8,384	309,684	15,136	7,609	167,557
Montana.....	32	13	1,024	7,211	781	1,956	5,566	36,804	22,985	992	57,450	3,331	578	18,046
Colorado.....	124	13	1,874	11,290	1,387	2,876	7,663	28,907	33,613	1,270	60,903	2,887	2,500	29,176
New Mexico.....	26	7	2,429	19,220	1,827	4,200	14,820	68,613	33,583	4,740	104,164	2,772	2,184	62,787
Idaho.....	90	9	890	5,470	669	1,368	3,940	40,670	39,924	734	79,993	1,335	1,791	49,545

Excludes data for one establishment with less than five employees engaged in exploration and development work in Alaska.

Table 3.—PRIMARY PRODUCTS OF THE URANIUM-RADIUM-VANADIUM ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963			1958		
	Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts of minerals		Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts of minerals	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States, total:						
Production and shipments:						
Crude uranium-vanadium ores.....	6,461.2	2,885.0	77,229	5,480.2	3,621.8	91,303
From underground operations.....	4,306.2	(X)	(X)	3,129.8	(X)	(X)
From open-pit operations.....	2,155.0	(X)	(X)	2,350.4	(X)	(X)
Uranium-vanadium concentrates ¹	117.6	114.4	241,092	58.5	58.7	243,080
Minerals prepared.....	3,404.0	2,803.9	77,322	1,533.9	4,432.5	109,452
East and South:						
Production and shipments:						
Crude uranium-vanadium ores.....	156.4	130.8	1,424	37.2	37.2	565
From underground operations.....	7.2	(X)	(X)	33.9	(X)	(X)
From open-pit operations.....	149.2	(X)	(X)	3.3	(X)	(X)
Mountain:						
Production and shipments:						
Crude uranium-vanadium ores.....	6,147.2	2,732.5	74,306	5,271.6	3,569.5	90,372
Uranium-vanadium concentrates ¹	108.6	108.4	229,103	(NA)	(NA)	(NA)
Minerals prepared.....	3,401.5	2,505.7	76,375	(D)	4,138.1	105,300
Wyoming:						
Production and shipments:						
Crude uranium-vanadium ores.....	1,418.9	602.9	12,396	612.0	541.5	10,314
From underground operations.....	274.2	(X)	(X)	24.4	(X)	(X)
From open-pit operations.....	1,144.7	(X)	(X)	587.6	(X)	(X)
Uranium-vanadium concentrates ¹	77.8	77.8	45,045	(NA)	(NA)	(NA)
Minerals prepared.....	848.0	491.5	10,612	(NA)	(NA)	(NA)
Colorado:						
Production and shipments:						
Crude uranium-vanadium ores.....	1,111.3	583.0	14,951	836.0	794.1	18,623
Uranium-vanadium concentrates ¹	8.5	8.4	45,722	30.3	30.9	69,069
Minerals prepared.....	(²)	² 1,210.6	19,213	-	1,423.1	31,413
New Mexico:						
Production and shipments:						
Crude uranium-vanadium ores.....	2,624.9	607.4	12,227	2,196.2	705.2	9,952
Uranium-vanadium concentrates ¹	6.6	6.6	85,257	4.6	4.5	67,200
Minerals prepared.....	³ 2,377.2	(³)	(D)	1,310.3	687.0	14,903
Arizona:						
Production and shipments:						
Crude uranium-vanadium ores.....	243.5	134.9	4,122	221.5	222.5	6,864
Utah:						
Production and shipments:						
Crude uranium-vanadium ores.....	748.6	804.4	(D)	1,402.7	1,303.0	44,565
From underground operations.....	742.6	(X)	(X)	1,270.7	(X)	(X)
From open-pit operations.....	6.0	(X)	(X)	132.0	(X)	(X)
Pacific:						
Production and shipments:						
Crude uranium-vanadium ores.....	156.8	21.6	1,499	171.4	15.1	366

- Represents zero.

(D) Withheld to avoid disclosing figures for individual companies.

(NA) Not available.

(X) Not applicable.

¹Concentrates include lignite ash valued for its uranium content, slurry, and low-grade concentrates shipped to mills for further upgrading.²The quantity figure for minerals mined and prepared in the same establishment is included with the quantity figure for minerals received from other establishments for preparation.³The quantity figure for minerals received from other establishments for preparation is included with the figure for minerals mined and prepared in the same establishment.

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MIC63(P)-10E-4



INDUSTRY SERIES

preliminary
report

Mercury ores and Miscellaneous metal ores

SIC Codes 1092 and 1099

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Mercury Ores Industry shipped products valued at \$3.7 million, a decrease of 57 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed

a decrease of 52 percent from 1958 to a total of 316 employees in 1963. Value added in mining amounted to \$2.6 million in 1963, a decrease of 63 percent from 1958.

The Mercury Ores Industry represents establishments primarily engaged in mining, milling, or otherwise preparing mercury ores. This industry includes the production of metallic mercury by furnacing or retorting at the mine site.

During 1963, establishments in the Miscellaneous Metal Ores Industry shipped products valued at

Table 1A.—GENERAL STATISTICS FOR THE MERCURY ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954 ²	1939
Establishments:					
Total.....	Number.....	49	79	87	³ 69
With 20 employees or more.....	...do.....	3	9	5	(NA)
All employees:					
Number.....	Number.....	316	652	453	702
Payroll.....	Thousand dollars...	1,839	3,112	1,972	916
Production, development, and exploration workers:					
Number.....	Number.....	279	569	372	621
Man-hours.....	Thousand.....	610	1,223	841	1,421
Wages.....	Thousand dollars...	1,561	2,627	1,607	752
Value added in mining.....	...do.....	2,627	7,093	3,355	1,425
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	1,278	2,006	1,453	⁴ 405
Contract work only.....	...do.....	248	55	28	4
Cost of purchased machinery installed.....	...do.....	128	370	226	(NA)
Value of shipments and receipts.....	...do.....	3,716	8,607	4,519	⁵ 1,830
Capital expenditures.....	...do.....	317	862	515	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	15	(NA)	12	10

(NA) Not available.

¹Excludes data for two establishments in Alaska, with total employment in the range 10-19.

²Excludes data for two establishments in Alaska, one with no employees and one with 20-49 employees.

³Represents number of mines.

⁴Excludes cost of minerals received for preparation.

⁵Represents value of net production and receipts.

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\$3.0 million, an increase of less than one percent over 1958, according to preliminary results. Average employment in this industry showed a decrease of 30 percent from 1958 to a total of 166 employees in 1963. Value added in mining amounted to \$1.6 million in 1963, a decrease of 13 percent from 1958.

The Miscellaneous Metal Ores (Metallic Ores, N.E.C.) Industry represents establishments primarily engaged in mining, milling, or otherwise preparing miscellaneous metallic minerals (ores), not elsewhere classified, such as antimony, beryllium, palladium, tin, and other rare-earth ores.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the

cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, for the Mercury Ores Industry, the total value of shipments and receipts amounted to \$3.7 million, all of which represented products primary to the industry. For the Metallic Ores Industry, N.E.C., Industry value of shipments and receipts amounted to \$3.0 million. Of this total, only about two-thirds represented products primary to the industry.

The total value of shipments for an industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, all mercury ores were produced in the Mercury Ores Industry, but for miscellaneous metallic minerals only about one-third of the value of shipments represented products shipped by the Metallic Ores, N.E.C., Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work that they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for these industries will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as

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the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE MISCELLANEOUS METAL ORES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954 ²
Establishments:				
Total.....	Number.....	25	66	47
With 20 employees or more.....	...do.....	2	2	2
All employees:				
Number.....	Number.....	166	237	118
Payroll.....	Thousand dollars....	1,054	1,063	447
Production, development, and exploration workers:				
Number.....	Number.....	131	187	98
Man-hours.....	Thousand.....	228	343	207
Wages.....	Thousand dollars....	726	852	338
Value added in mining.....	...do.....	1,598	1,847	794
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	1,794	1,443	860
Contract work only.....	...do.....	42	56	132
Cost of purchased machinery installed.....	...do.....	226	427	748
Value of shipments and receipts.....	...do.....	3,034	3,018	1,325
Capital expenditures.....	...do.....	584	699	1,077
Horsepower rating of power equipment.....	Thousand horsepower..	19	(NA)	19

(NA) Not available.

¹Excludes data for 2 establishments in Alaska, with employment range of 20-49.

²Excludes data for 5 establishments in Alaska, two of them with 20 to 59 employees, and 3 with less than 5 employees.

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Table 2.—GENERAL STATISTICS FOR THE MERCURY ORES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	49	3	316	1,839	279	610	1,561	2,627	1,278	128	3,716	317	1,652	17,093
Mountain.....	15	1	91	486	79	161	440	489	348	14	813	38	2184	22,516
Pacific.....	34	2	225	1,353	200	449	1,121	2,138	930	114	2,903	279	1,468	14,577

¹Excludes data for two establishments in Alaska with total employment in the range 10-19.²Includes data for two establishments in Texas with less than five employees.

Table 3.—PRIMARY PRODUCTS OF THE MERCURY ORES AND MISCELLANEOUS METAL ORES (METALLIC ORES, N.E.C.) INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Product	Unit of measure	1963			1958		
		Total production	Total shipments (including inter-plant transfers) or receipts of minerals		Total production	Total shipments (including inter-plant transfers) or receipts of minerals	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
Mercury ores:							
Production and shipments:							
Crude mercury ore.....	Short tons.....	128,184	9,871	60	1399,543	(D)	(D)
Mercury metal.....	Flasks (76 lbs.)	19,058	18,708	3,593	133,812	137,144	28,402
Minerals prepared.....	Short tons.....	118,331	-	-	3395,631	(3)	(D)
Zirconium concentrates.....	...do.....	78,279	78,810	3,465	36,458	40,734	1,678
Antimony, beryllium, germanium, bastnaesite, monazite, and thorium concentrates, and platinum group metals ⁴.....	.....	(X)	(X)	1,687	(X)	(X)	33,620

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Excludes figures for Alaska. The Bureau of Mines showed production of 3,380 flasks of mercury in Alaska.²The value of mercury metal produced in Alaska is excluded from the figure for mercury metal and included with the value of antimony, beryllium, etc.³The figures for minerals received from other establishments for preparation are combined with those for minerals produced and prepared at the same establishment. The quantity of minerals received from others represents less than 20 percent of the figure shown.⁴No thorium concentrates were reported produced in 1963 and no germanium concentrates in 1958.

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1963 CENSUS OF MINERAL INDUSTRIES

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INDUSTRY SERIES

Anthracite

SIC Code 1111

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Anthracite Industry shipped products valued at \$221 million, a decrease of 24 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 46 percent from 1958 to a total of 10.7

thousand employees in 1963. Value added in mining amounted to \$110 million in 1963, a decrease of 22 percent from 1958.

The Anthracite Industry represents establishments engaged primarily in producing anthracite (hard coal) or in developing anthracite mines. All establishments in the United States that are classified in this industry are in Pennsylvania. This industry includes underground mines, stripping or culm bank operations by owners, dredge operations, and coal preparation plants (breakers, washeries, and screening plants) whether or not operated in conjunction with the mines served. The production

Table 1.—GENERAL STATISTICS FOR THE ANTHRACITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	1,021	1,163	1,291	¹ 518
With 20 employees or more.....	do.....	85	117	186	(NA)
All employees:					
Number.....	Number.....	10,671	19,712	32,769	85,713
Payroll.....	Thousand dollars....	52,962	79,473	118,070	115,860
Production, development, and exploration workers:					
Number.....	Number.....	9,330	17,266	28,823	80,429
Man-hours.....	Thousand.....	17,728	26,409	42,061	120,085
Wages.....	Thousand dollars....	44,785	67,449	98,678	104,378
Value added in mining.....	do.....	110,475	142,198	167,090	146,418
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	116,232	154,631	200,663	² 43,230
Minerals received for preparation only.....	do.....	65,534	85,375	119,848	(NA)
Contract work only.....	do.....	21,273	39,319	50,156	11,029
Cost of purchased machinery installed.....	do.....	6,777	6,317	5,667	(NA)
Value of shipments and receipts.....	do.....	220,840	290,342	365,536	(NA)
Value of net shipments and receipts.....	do.....	156,275	199,214	248,513	189,648
Capital expenditures.....	do.....	12,644	12,804	7,884	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.	604	(NA)	1,072	1,019

(NA) Not available.

¹Represents number of mines, culm banks, and dredges.

²Excludes value of coal sold to preparation plants for further processing.

June 1965

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BUREAU OF THE CENSUS



of fuel briquets and packaged fuel is classified in Major Group 29, and the production of manufactured gas from coal in Industry 4925.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The census of mineral industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mineral establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production workers based on 12 monthly figures, plus the number of non-production workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas.

No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Anthracite Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, the total value of shipments and other receipts of establishments classified in the Anthracite Industry amounted to \$220.8 million, of which only \$0.9 million represented products primary to other industries, and miscellaneous receipts. No anthracite was produced at establishments classified in other industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Anthracite Industry in 1963 was \$221 million and the value of net shipments and receipts was \$156 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities of the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account

in comparing industry statistics (table 1) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during

the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, it was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE ANTHRACITE INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958
(Not applicable to this industry since all operations are located in Pennsylvania)

Table 3A.—PRIMARY PRODUCTS OF THE ANTHRACITE INDUSTRY IN THE UNITED STATES: 1963 AND 1958

Product	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
Net anthracite shipments.....	18,399	155,791	22,341	196,425
Raw anthracite shipped (including interplant transfers), total...	17,693	65,797	20,598	89,134
For use without preparation.....	976	1,664	1,158	2,966
For preparation at other establishments.....	16,717	64,133	19,440	86,168
Raw anthracite for preparation, total.....	29,643	(X)	34,389	(X)
Received from other establishments.....	16,366	65,534	20,151	85,375
Mined and prepared at same establishment.....	13,277	(X)	14,238	(X)
Prepared anthracite shipped, total.....	17,423	154,127	21,183	193,459
Mechanically cleaned (breaker, washery, and dredge product)....	17,266	152,885	20,804	190,389
Mechanically crushed, screened, or sized only.....	157	1,242	379	3,070

(X) Not applicable.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR ANTHRACITE SHIPPED BY ALL
PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
Net anthracite shipments.....1963...	62	102
.....1958...	75	106
Raw anthracite, gross shipments.....1963...	73	79
.....1958...	85	92
Prepared anthracite.....1963...	61	103
.....1958...	74	106

U.S. DEPARTMENT OF COMMERCE
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1963 CENSUS OF MINERAL INDUSTRIES

MC63(P)-11B-2

INDUSTRY SERIES

preliminary
report

Anthracite mining services

SIC Code 1112

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The data will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, receipts for services of the Anthracite Mining Services Industry were \$15.2 million, a decrease of 56 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 65 percent from 1958 to a total of

1,087 employees in 1963. Value added in mining amounted to \$10.0 million in 1963, a decrease of 55 percent from 1958.

The Anthracite Mining Services Industry represents establishments engaged primarily in overburden stripping and strip-mining for fresh-mined anthracite, loading culm-bank material, and performing other services for anthracite mine operators on a contract, fee, or other basis. Other services included are prospect, test, and other drilling, mine tunnelling, shaft sinking, draining mines, and backfilling of strip pits.

Table 1.—GENERAL STATISTICS FOR THE ANTHRACITE MINING SERVICES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	42	85	145	¹ 71
With 20 employees or more.....	...do.....	14	42	59	(NA)
All employees:					
Number.....	Number.....	1,087	3,101	4,693	2,879
Payroll.....	Thousand dollars...	5,694	13,923	17,859	4,190
Production, development, and exploration workers:					
Number.....	Number.....	949	2,781	4,203	2,683
Man-hours.....	Thousand.....	1,823	4,458	6,205	4,377
Wages.....	Thousand dollars...	4,801	11,976	15,254	3,420
Value added in mining.....	...do.....	10,008	22,291	29,745	7,605
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	5,509	12,566	12,157	² 3,873
Subcontract work only.....	...do.....	863	1,186	1,070	(NA)
Cost of purchased machinery installed.....	...do.....	1,995	3,716	3,603	(NA)
Value of shipments and receipts.....	...do.....	15,211	34,786	42,895	11,478
Capital expenditures.....	...do.....	2,301	3,787	2,610	1,009
Horsepower rating of power equipment.....	Thousand horsepower	132	(NA)	434	73

(NA) Not available.

¹Represents number of companies.

²Excludes cost of subcontract work.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service establishments in this industry. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size. Mining service establishments, however, were permitted to file one report for all mining services performed in the United States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The total receipts for services reported by establishments classified in the Anthracite Mining Services Industry consists not only of receipts for services described above as primary to the industry, but also of the value of secondary services, such as hauling (which are primary in other industries). However, the total receipts of establishments classified in the Anthracite Mining Services Industry amounted to \$15.2 million, all of which was for services primary to this industry.

The total receipts for the industry, which are the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total receipts for primary services of the industry by all service establishments. Such figures are shown in table 3. However, for 1963, receipts for all reported services primary to this industry were received by establishments classified in the industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (table 1) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other mineral industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE ANTHRACITE MINING SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Not applicable to this industry since all operations are located in Pennsylvania.)

Table 3.—RAW ANTHRACITE MINED AND RECEIPTS FOR PRIMARY SERVICES PERFORMED, BY TYPE OF SERVICE, FOR THE ANTHRACITE MINING SERVICES INDUSTRY: 1963 AND 1958

Type of service	1963		1958	
	Raw coal mined and culm-bank material loaded (1,000 short tons)	Receipts for services performed (\$1,000)	Raw coal mined and culm-bank material loaded (1,000 short tons)	Receipts for services performed (\$1,000)
Anthracite mining services, total.....	5,871	15,211	11,432	34,231
Stripping overburden and strip mining anthracite not for own account.....	4,140	13,787	8,682	30,968
Recovering culm-bank coal.....	1,331	1,320	2,750	2,337
All other services ¹	(X)	104	(X)	926

(X) Not applicable.

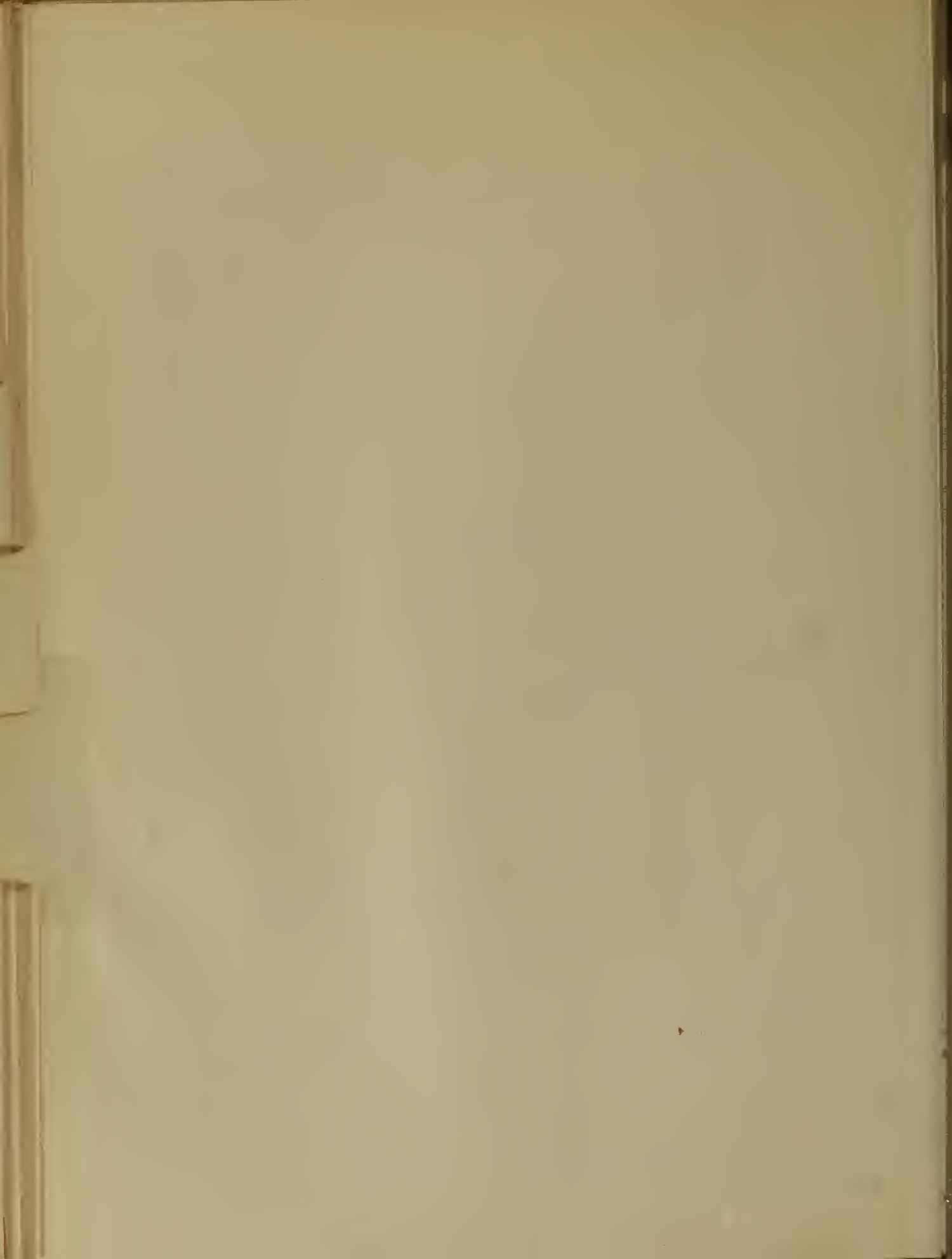
¹Represents services such as sinking mine shafts and driving mine tunnels; prospect, test and other drilling (including blasting); exploration work, including exploratory surveying, and other anthracite services, n.e.c.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC3(P)-12A-1

INDUSTRY SERIES

preliminary
report

Bituminous coal and lignite

SIC Codes 1211 and 1212

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Bituminous Coal Industry shipped products valued at \$2,351 million, a decrease of 2 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 29 percent from 1958 to a total of

132 thousand employees in 1963. Value added in mining amounted to \$1,597 million in 1963, an increase of less than one percent from 1958.

During 1963, manufacturers in the Lignite Industry shipped products valued at \$14 million, an increase of 27 percent over 1958. Average employment in this industry showed an increase of less than one percent from 1958 to a total of 512 employees in 1963. Value added in mining amounted to \$12 million in 1963, an increase of 27 percent from 1958.

The Bituminous Coal Industry represents establishments engaged primarily in producing bituminous

Table 1A.—GENERAL STATISTICS FOR THE BITUMINOUS COAL INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939 ¹
Establishments:					
Total.....	Number.....	6,130	6,725	6,653	² 5,716
With 20 employees or more.....	...do.....	1,149	1,346	1,438	(NA)
All employees:					
Number.....	Number.....	132,357	185,933	217,186	388,955
Payroll.....	Thousand dollars...	752,663	905,041	868,759	474,747
Production, development, and exploration workers:					
Number.....	Number.....	117,074	161,908	198,134	369,265
Man-hours.....	Thousand.....	214,026	264,779	323,098	542,310
Wages.....	Thousand dollars...	639,885	753,320	759,659	430,564
Value added in mining.....	...do.....	1,597,228	1,591,321	1,402,551	607,318
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	786,060	843,433	642,111	³ 120,040
Minerals received for preparation only.....	...do.....	278,145	325,724	⁴ 204,074	(NA)
Contract work only.....	...do.....	61,827	70,346	54,613	1,899
Cost of purchased machinery installed.....	...do.....	181,763	147,732	119,159	(NA)
Value of shipments and receipts.....	...do.....	2,351,086	2,398,224	2,046,784	(NA)
Value of net shipments and receipts.....	...do.....	2,058,067	2,065,892	1,784,798	727,358
Capital expenditures.....	...do.....	213,965	184,262	117,037	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	6,540	(NA)	6,108	3,344

(NA) Not available.

¹Excludes data for Alaska. The Bureau of Mines, U.S. Department of Interior, reported that the value of coal produced in Alaska in 1939 was \$585 thousand.

²Represents number of mines.

³Excludes cost of coal received for preparation.

⁴Represents coal received for mechanical cleaning only.

September 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



coal or in developing bituminous coal mines. This industry includes underground mining, auger mining, strip mining, and coal cleaning, crushing, screening, and sizing plants whether or not operated in conjunction with the mines served.

The Lignite Industry represents establishments primarily engaged in producing lignite or in developing lignite mines.

The report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based upon the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The census of mineral industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll periods ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and

geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. For the Bituminous Coal Industry, the total value of shipments and other receipts in 1963 was \$2,351 million of which over 99 percent represented products primary to the industry. For the Lignite Industry, value of shipments and receipts amounted to \$14 million, with 98 percent representing products primary to the industry.

The total value of shipments for an industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. Such figures are shown in table 3A. However, for 1963, less than one percent of all bituminous coal and no lignite was produced in other industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in tables 1A and 1B. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments or, if not available, cost of minerals received for preparation from the "gross" shipments. Value of shipments of products purchased for resale without further processing is also subtracted for "net" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Bituminous Coal Industry in 1963 was \$2,351 million and the value of net shipments and receipts was \$2,058 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3b. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1A, 1B, and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1A, 1B, and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such "employment" and "value

added." Similar preliminary and final reports are being issued for other industries. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is also being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE LIGNITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	59	58	60	¹ 131
With 20 employees or more.....	...do.....	6	8	9	(NA)
All employees:					
Number.....	Number.....	512	510	574	1,595
Payroll.....	Thousand dollars...	2,760	2,693	2,588	1,603
Production, development, and exploration workers:					
Number.....	Number.....	437	437	505	1,480
Man-hours.....	Thousand.....	871	844	901	3,027
Wages.....	Thousand dollars...	2,205	2,261	2,177	1,384
Value added in mining.....	...do.....	11,791	9,309	9,093	2,879
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	4,017	1,636	1,326	578
Cost of purchased machinery installed.....	...do.....	2,877	1,522	607	(NA)
Value of shipments and receipts.....	...do.....	14,052	11,035	10,387	(NA)
Value of net shipments and receipts.....	...do.....	13,921	11,035	10,387	3,457
Capital expenditures.....	...do.....	4,633	1,432	639	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	82	(NA)	75	21

(NA) Not available.

¹Represents number of mines.

Table 2.—GENERAL STATISTICS FOR THE BITUMINOUS COAL AND LIGNITE INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
BITUMINOUS COAL														
United States, total.....	6,130	1,149	132,357	752,663	117,074	214,026	639,885	1,597,228	786,060	181,763	2,351,086	213,965	185,933	1,591,321
Northeast.....	1,170	184	24,124	142,006	20,741	38,468	114,293	274,820	169,262	35,429	435,721	43,790	36,873	286,384
Pennsylvania.....	1,170	184	23,885	139,450	20,741	38,468	114,293	274,820	169,262	35,429	435,721	43,790	36,503	286,384
East North Central	554	168	20,417	135,976	17,542	34,145	113,297	313,182	126,773	48,469	432,766	55,658	25,201	283,283
Ohio.....	381	81	8,337	50,536	7,092	13,705	41,442	106,420	63,037	18,248	165,804	21,901	9,938	100,122
Indiana.....	70	20	2,975	19,810	2,587	4,774	16,772	45,992	11,284	10,416	57,864	9,828	4,104	44,268
Illinois.....	103	67	9,105	65,630	7,863	15,666	55,083	160,770	52,452	19,805	209,098	23,929	11,139	138,893
West North Central	84	13	1,686	9,855	921	1,912	5,623	17,983	4,073	7,838	22,997	6,897	1,877	16,022
Iowa.....	35	4	288	1,222	268	550	1,107	3,380	889	637	4,292	614	421	3,552
Missouri.....	35	6	1,134	6,589	415	856	2,744	10,450	2,014	7,201	18,705	6,283	1,204	9,832
Kansas.....	14	3	264	2,044	238	506	1,772	4,153	1,170		252		2,638	
South Atlantic....	2,389	452	52,949	296,747	47,737	87,303	258,748	606,991	295,707	46,086	887,886	60,898	75,925	636,742
Maryland.....	65	4	425	1,510	413	701	1,463	4,232	1,627	180	5,438	601	540	2,985
Virginia.....	768	137	11,311	47,676	10,251	17,525	42,398	96,819	61,915	6,093	155,945	8,882	13,737	100,135
West Virginia....	1,553	311	41,207	247,550	37,068	69,070	214,877	505,923	232,161	39,813	726,482	51,415	61,634	533,574
East South Central	1,681	279	28,575	140,811	25,988	45,084	124,368	317,579	160,379	38,543	477,767	38,734	38,511	302,832
Kentucky.....	1,214	222	21,028	102,235	19,178	33,470	91,380	226,560	124,393	33,965	355,020	29,898	28,397	227,458
Tennessee.....	272	16	1,865	8,144	1,675	2,821	7,172	20,423	7,864	2,067	27,171	3,183	2,661	16,575
Alabama.....	195	41	5,682	30,432	5,135	8,793	25,816	70,596	28,122	2,511	95,576	5,653	7,453	58,799
West South Central	40	7	453	2,430	421	773	2,215	5,513	1,954	734	7,381	820	1,059	10,618
Arkansas.....	17	1	107	523	105	206	517	1,348	332	161	1,528	313	252	2,081
Oklahoma.....	23	6	346	1,907	316	567	1,698	4,165	1,622	573	5,853	507	807	8,537
Mountain.....	193	41	3,766	21,534	3,376	5,605	18,922	54,815	26,277	4,291	79,126	6,257	5,666	48,051
Wyoming.....	17	6	300	1,473	261	395	1,274	6,163	2,810	115	8,845	243	506	4,244
Colorado.....	100	16	1,374	8,118	1,242	2,205	7,211	19,470	5,239	1,635	24,033	2,311	2,016	16,348
New Mexico.....	18	3	309	1,820	265	425	1,482	5,567	1,813	1,146	6,632	1,894	156	1,184
Utah.....	36	16	1,726	9,941	1,556	2,502	8,784	23,337	16,272	1,382	39,213	1,778	2,824	25,376
Pacific.....	19	5	387	3,304	348	736	2,419	6,345	1,635	373	7,442	911	533	7,389
Alaska.....	10	3	194	2,226	171	445	1,447	5,204	1,224	372	5,894	906	257	5,780
LIGNITE														
United States, total.....	59	6	512	2,760	437	871	2,205	11,791	4,017	2,877	14,052	4,633	510	9,309
North Central and South.....	47	6	479	2,615	405	806	2,068	11,261	3,832	2,871	13,345	4,619	483	9,112
West (Montana and California).....	12	-	33	145	32	65	137	530	185	6	707	14	27	197

- Represents zero.

Table 3A.— PRIMARY PRODUCTS OF THE BITUMINOUS COAL AND LIGNITE INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	Net coal shipments ¹				1963			
	1963		1958		Raw coal shipped (including interplant transfers)			
					For use without preparation		For preparation at other establishments ²	
	Short tons (1,000)	Value (\$1,000)	Short tons (1,000)	Value (\$1,000)	Short tons (1,000)	Value (\$1,000)	Short tons (1,000)	Value (\$1,000)
BITUMINOUS COAL								
United States, total.....	457,079	2,052,842	417,075	2,062,140	62,302	225,407	82,173	278,831
Middle Atlantic (Pennsylvania)	71,342	364,309	69,617	380,374	10,500	36,960	17,961	67,356
East North Central, total.....	103,964	397,100	93,338	373,308	8,320	29,698	13,561	33,029
Ohio.....	36,706	141,362	33,970	138,309	6,160	22,175	8,712	22,092
Indiana.....	15,084	57,630	15,059	58,116	1,410	5,135	-	-
Illinois.....	52,174	198,108	44,309	176,883	750	2,388	4,849	10,937
West North Central, total.....	5,580	22,958	4,572	18,839	1,136	4,277	-	-
Iowa.....	1,216	4,278	1,261	4,520	204	830	-	-
Missouri and Kansas.....	4,364	18,680	3,311	14,319	932	3,447	-	-
South Atlantic.....	163,446	774,167	151,349	806,869	22,902	90,190	29,247	103,802
Maryland.....	1,184	4,653	889	3,952	718	2,806	136	700
Virginia.....	30,213	127,519	26,255	128,386	6,976	27,398	9,170	27,772
West Virginia.....	132,043	641,974	124,193	674,478	15,202	59,965	19,941	75,330
East South Central, total.....	96,985	409,905	84,736	396,265	18,419	60,035	19,895	65,648
Kentucky.....	78,010	295,474	66,671	292,696	15,962	49,051	18,386	58,900
Tennessee.....	6,125	24,529	6,304	25,384	1,615	5,847	546	2,050
Alabama.....	12,850	89,902	11,761	78,185	842	5,137	963	4,698
West South Central, total.....	1,242	7,306	2,047	14,354	90	571	-	-
Arkansas.....	227	1,528	390	3,068	55	363	-	-
Oklahoma.....	1,015	5,778	1,657	11,286	35	208	-	-
Mountain.....	13,466	69,697	10,394	62,996	5,927	53,620	1,509	8,996
Montana.....	57	387	216	1,142	-	-	-	-
Wyoming.....	3,134	8,845	1,634	5,613	47	259	-	-
Colorado.....	3,937	23,344	3,121	19,129	283	1,313	(D)	(D)
New Mexico.....	1,958	6,632	130	819	5,458	51,489	-	-
Utah.....	4,378	30,473	5,293	36,293	139	559	(D)	(D)
Pacific, total.....	1,054	7,400	1,022	9,135	58	556	-	-
Washington.....	198	1,506	260	2,037	8	56	-	-
Alaska.....	856	5,894	762	7,098	(²)	(²)	-	-
LIGNITE								
United States, total.....	4,963	13,580	4,231	11,021	345	1,015	32	131
North Central and South.....	4,646	12,893	4,123	10,750	321	925	27	111
West.....	317	687	108	271	24	90	5	20

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE BITUMINOUS COAL AND LIGNITE INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Geographic area	1963—Continued									
	Raw coal for preparation						Prepared coal shipped (including interplant transfers)			
	For mechanical cleaning			For mechanical crushing, screening, or sizing only			Mechanically cleaned		Mechanically crushed, screened, or sized only	
	Received from other establishments		Mined and prepared at same establish- ment (1,000 short tons)	Received from other establishments		Mined and prepared at same establish- ment (1,000 short tons)	Short tons	Value	Short tons	Value
	Short tons (1,000)	Cost (\$1,000)		Short tons (1,000)	Cost (\$1,000)						(1,000)	($1,000)	(1,000)	($1,000)
BITUMINOUS COAL										
United States, total.....	58,984	208,647	312,281	21,246	69,498	77,859	295,463	1,433,253	99,314	394,182
Middle Atlantic (Pennsylvania)	15,500	61,285	41,734	2,223	7,291	13,820	45,130	262,000	15,712	65,349
East North Central, total.....	11,022	23,950	77,379	2,573	8,170	20,991	72,208	281,946	23,436	85,456
Ohio.....	6,275	13,297	11,962	2,378	7,636	13,519	14,619	59,600	15,927	59,587
Indiana.....	-	-	13,920	-	-	2,381	11,318	43,191	2,356	9,304
Illinois.....	4,747	10,653	51,497	195	534	5,091	46,271	179,155	5,153	16,565
West North Central, total.....	-	-	4,710	-	-	1,158	3,288	14,594	1,156	4,037
Iowa.....	-	-	-	-	-	1,014	-	-	1,012	3,448
Missouri and Kansas.....	-	-	4,710	-	-	144	3,288	14,594	144	639
South Atlantic.....	19,398	73,896	128,204	³ 8,246	³ 26,430	14,610	116,641	586,293	23,903	97,684
Maryland.....	-	-	-	³ 4,032	³ 11,245	333	-	-	466	1,847
Virginia.....	5,278	17,166	13,705	-	-	3,426	15,943	71,792	7,294	28,329
West Virginia.....	14,120	56,730	114,499	4,214	15,185	10,851	100,698	514,501	16,143	67,508
East South Central, total.....	⁴ 13,064	⁴ 49,516	55,667	8,204	27,607	16,081	53,417	251,607	25,149	98,263
Kentucky.....	10,557	34,563	41,333	7,796	25,922	10,201	43,199	176,401	18,849	70,022
Tennessee.....	(D)	(D)	164	408	1,685	3,820	261	1,428	4,249	17,254
Alabama.....	887	4,562	14,170	-	-	2,060	9,957	73,778	2,051	10,987
West South Central, total.....	-	-	235	-	-	954	198	1,677	954	5,058
Arkansas.....	-	-	-	-	-	150	-	-	150	1,011
Oklahoma.....	-	-	235	-	-	804	198	1,677	804	4,047
Mountain.....	(⁴)	(⁴)	3,432	(³)	(³)	⁵ 10,245	3,998	30,657	⁵ 9,004	⁵ 38,285
Montana.....	-	-	(D)	-	-	26	(D)	(D)	25	164
Wyoming.....	-	-	(D)	-	-	3,057	(D)	(D)	3,057	8,429
Colorado.....	-	-	666	-	-	3,150	584	2,830	3,070	19,201
New Mexico.....	-	-	(D)	-	-	⁵ 1,656	(D)	(D)	⁵ 1,671	⁵ 5,319
Utah.....	(⁴)	(⁴)	2,167	(³)	(³)	2,356	3,059	24,742	1,181	5,172
Pacific, total.....	-	-	920	-	-	(⁵)	583	4,479	(⁵)	(⁵)
Washington.....	-	-	276	-	-	-	-	-	-	-
Alaska.....	-	-	644	-	-	(⁵)	583	4,479	(⁵)	(⁵)
LIGNITE										
United States, total.....	-	-	-	(D)	(D)	4,601	-	-	4,618	12,565
North Central and South.....	-	-	-	(D)	(D)	4,317	-	-	4,325	11,968
West.....	-	-	-	(D)	(D)	284	-	-	293	597

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies.

¹Represents raw coal for use without preparation plus prepared coal.²Includes some crushed or screened coal shipped for mechanical cleaning at another establishment.³Figures for Utah are included with those for Maryland and Virginia.⁴Figures for Utah are included with those for the East South Central.⁵Figures for Alaska are included with those for New Mexico.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR BITUMINOUS COAL AND LIGNITE SHIPPED
BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
Net bituminous coal shipments.....1963...	121	97
.....1958...	111	108
Raw bituminous coal, gross shipments.....1963...	117	90
.....1958...	109	106
Prepared bituminous coal.....1963...	122	99
.....1958...	111	109
Net lignite shipments.....1963...	112	113
.....1958...	95	107

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-12A-2

INDUSTRY SERIES

Bituminous coal and lignite mining services

SIC Code 1213

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Bituminous Coal and Lignite Mining Services Industry performed services valued at \$23.0 million, an increase of 6 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 21 percent

from 1958 to a total of 1.2 thousand employees in 1963. Value added in mining amounted to \$16.2 million in 1963, an increase of 7 percent from 1958.

The Bituminous Coal and Lignite Mining Services Industry represents establishments engaged primarily engaged in performing bituminous coal and lignite mining services for others on a contract, fee, or other basis. Included are such services as overburden stripping, strip mining, drilling, shaft sinking, and mine tunnelling.

This report includes figures for administrative offices, storage facilities, and other auxiliary

Table 1.—GENERAL STATISTICS FOR THE BITUMINOUS COAL AND LIGNITE MINING SERVICES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	128	157	152	¹ 32
With 20 employees or more.....	...do.....	17	21	(NA)	(NA)
All employees:					
Number.....	Number.....	1,199	1,520	1,446	228
Payroll.....	Thousand dollars....	6,093	7,332	6,068	326
Production, development, and exploration workers:					
Number.....	Number.....	1,111	1,385	1,331	199
Man-hours.....	Thousand.....	2,212	2,547	2,458	365
Wages.....	Thousand dollars....	5,536	6,519	5,511	240
Value added in mining.....	...do.....	16,182	15,114	12,517	477
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	...do.....	6,757	6,391	4,938	² 135
Cost of purchased machinery installed.....	...do.....	2,804	2,940	2,552	(NA)
Receipts for services and shipments.....	...do.....	22,955	21,649	17,596	612
Capital expenditures.....	...do.....	2,788	2,796	2,411	41
Horsepower rating of power equipment.....	Thousand horsepower.	120	(NA)	164	8

(NA) Not available.

¹Represents number of companies.

²Excludes cost of subcontract work.

August 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



units which service establishments in this industry. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a report for each establishment. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size. Mining service establishments, however, were permitted to file one report for all mining services performed in the United States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The total receipts for services reported by establishments classified in the Bituminous Coal

and Lignite Mining Services Industry consists not only of receipts for services described above as primary to the industry, but also of the value of secondary services, such as hauling (which are primary in other industries) and receipts for products purchased for resale without further processing. However, the total receipts of establishments classified in the Bituminous Coal and Lignite Mining Services Industry amounted to \$23.0 million, of which only \$0.5 million represented services primary to other industries and \$0.4 million represented resales.

The total receipts for the industry, which are the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total receipts for primary services of the industry by all service establishments. Such figures are shown in table 3. However, for 1963, receipts for services primary to this industry reported by establishments classified in other industries amounted to less than one percent of the total shown for such services.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the primary services of this industry performed by all mineral services industries.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other mineral industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 2.—GENERAL STATISTICS FOR THE BITUMINOUS COAL AND LIGNITE MINING SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and subcontract work	Cost of purchased machinery installed	Receipts for services and shipments	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	128	17	1,199	6,093	1,111	2,212	5,536	16,182	6,757	2,804	22,955	2,788	1,520	15,114
Middle Atlantic (Pennsylvania)...	42	5	431	2,141	404	992	2,007	5,546	2,331	1,104	8,155	826	565	5,394
East North Central. Ohio.....	21 15	3 3	183 167	915 827	176 160	320 296	889 801	2,788 2,485	652 601	197 171	3,220 2,867	417 390	100 98	862 836
South.....	56	8	510	2,570	469	792	2,259	6,587	3,313	1,479	9,873	1,506	(NA)	(NA)
South Atlantic.....	37	6	372	1,973	338	575	1,697	4,754	2,747	1,049	7,558	992	617	5,733
Virginia.....	7	4	176	1,151	160	240	945	2,479	1,922	671	4,462	610	121	1,531
West Virginia..	30	2	196	822	178	335	752	2,275	825	378	3,096	382	476	4,017
East South Central.....	16	2	132	561	125	205	526	1,718	521	418	2,155	502	173	2,140
Kentucky.....	9	-	45	181	43	79	164	542	85	229	550	306	115	1,349
West.....	9	1	75	467	62	108	381	1,261	461	24	1,707	39	(NA)	(NA)

(NA) Not available.

Table 3.—RAW COAL MINED AND RECEIPTS FOR PRIMARY SERVICES PERFORMED, BY TYPE OF SERVICE, FOR THE BITUMINOUS COAL AND LIGNITE MINING SERVICES INDUSTRY: 1963 AND 1958

Type of service	1963		1958	
	Raw coal mined (1,000 short tons)	Receipts for services (\$1,000)	Raw coal mined (1,000 short tons)	Receipts for services (\$1,000)
Bituminous coal and lignite mining services, total.....	7,354	22,159	6,327	21,537
Stripping overburden and strip mining coal not for own account.....	5 986	16,265	5,112	15,765
Auger mining coal not for own account.....	1,368	3,542	1,215	3,358
Prospect, test, and other drilling (including blasting).....	(X)	814	(X)	842
Exploration work, including geophysical surveying.....	(X)	1,296	(X)	1,572
Other services, such as backfilling, timbering, clay tamping, tunneling, etc.....	(X)	242	(X)	

(X) Not applicable.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-13B-1

INDUSTRY SERIES

Crude petroleum and natural gas

SIC Code 1311

preliminary
report

Part I: All Companies

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, shipments and receipts of all establishments in the Crude Petroleum and Natural Gas Industry were valued at \$9,813 million, an increase of 17 percent over 1958, according to preliminary results obtained from the 1963 census.

Average employment in this industry showed a decrease of 21 percent from 1958 to a total of 143 thousand employees in 1963. Value added in mining amounted to \$8,907 million in 1963, an increase of 21 percent from 1958.

The cost of drilling and equipping wells completed in 1963 by all companies reporting drilling was \$2,044 million, a decrease of 16 percent from 1958. The footage drilled decreased between 1958 and 1963 by 6 percent to a total footage of 182 million in 1963. The average footage drilled per well increased for the same period from 4,124 to

Table 1A.—GENERAL STATISTICS FOR THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939 ¹
Establishments:					
Total.....	Number.....	14,376	² 12,010	² 11,513	² 8,605
With 20 employees or more.....	do.....	952	² 1,093	² 1,043	(NA)
All employees:					
Number.....	Number.....	142,911	180,121	³ 172,506	136,051
Payroll.....	Thousand dollars...	994,620	1,043,108	³ 835,740	234,899
Production, development, and exploration workers:					
Number.....	Number.....	83,107	102,485	³ 109,792	105,505
Man-hours.....	Thousand.....	165,904	201,009	³ 216,581	190,674
Wages.....	Thousand dollars...	493,988	497,867	³ 459,955	155,700
Value added in mining.....	do.....	8,907,401	⁴ 7,339,922	³ 6,129,213	1,071,989
Cost of supplies, purchased fuel and electric energy, and contract work.....	do.....	2,679,178	2,510,308	³ 2,218,290	303,965
Contract work only.....	do.....	1,472,642	1,455,267	³ 1,458,807	199,034
Cost of purchased machinery installed.....	do.....	419,873	486,886	³ 621,048	(NA)
Value of shipments and receipts.....	do.....	9,812,893	⁴ 8,385,906	7,070,097	⁵ 1,375,954
Capital expenditures.....	do.....	2,193,559	1,947,634	³ 1,898,454	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	12,119	(NA)	³ 9,123	3,397

(NA) Not available.

¹Except for number of establishments, includes data for 2 nonproducing establishments in the Natural Gas Liquids Industry.

²Figures for 1963 and earlier years are not entirely comparable. For 1963, companies made separate reports by districts for Louisiana, Texas, and New Mexico. For these three States in 1963, number of establishments was 6,110, of which 438 had 20 or more employees, and value added was \$5,654 million. Figures for the same items for 1958 were 4,068, 445, and \$4,375 million, respectively.

³Excludes data for 5 establishments in Alaska.

⁴Excludes data for 17 establishments with 81 employees in Alaska.

⁵Represents value of production and other receipts.

July 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



For sale by the Bureau of the Census, Washington, D. C., 20233, and U. S. Department of Commerce Field Offices. 10 cents.

For sale by the Bureau of the Census, Washington, D. C., 20233, and U. S. Department of Commerce Field Offices. 10 cents.

4,386 while the average cost per well for drilling and equipping decreased from \$51.7 thousand to \$49.1 thousand and the average cost per foot decreased from \$12.54 to \$11.21.

The Crude Petroleum and Natural Gas Industry represents establishments engaged primarily in operating oil and gas field properties. Such activities include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; the operation of separators, emulsion breakers, desilting equipment; and all other activities incident to making oil and gas marketable up to the point of shipment from the producing property. This industry also includes the production of oil through the mining and extraction of oil from oil shale and oil sands. Establishments primarily engaged in performing oil and gas field services for operators on a contract, fee, or other basis are classified in Group 138, Oil and Gas Field Services.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report.

For oil and gas field operations, an establishment represents all oil and gas field operations of a reporting company in one State except for Louisiana, Texas, and New Mexico, where an establishment represents operations of a reporting company in a district.

The Crude Petroleum and Natural Gas Industry includes establishments performing oil and gas field services for others whose value of shipments of oil and gas was greater than the receipts for services. Companies were permitted, however, to prepare separate reports for their service activities and their oil and gas production; and a few companies prepared such separate reports.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of

12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers, based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Crude Petroleum and Natural Gas Industry consists not only of products described above as primary to the industry but also includes the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing. The total value of shipments and other receipts of establishments classified in the Crude Petroleum and Natural Gas Industry amounted to \$9,813 million in 1963. Of this total, more than 99 percent was for crude petroleum and natural gas which are the products primary to this industry. Less than one percent was for products primary to other industries, receipts for contract services, and products purchased and resold without further processing.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure, which may be obtained from table 3A, indicates that the value of crude petroleum, field condensates and drips, and natural gas shipped by all producers of such products was \$9,785 million. Of this total, more than 99 percent represents shipments of establishments classified in the Crude Petroleum and Natural Gas Industry.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3B, indexes of production and unit value (value of shipments divided by

quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and in performing services for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of this industry.

WELLS STATISTICS

Tables 3C and 3D show statistics for producing and shut-in wells and wells drilled during 1963, for all operators of oil and gas field properties, whether they are classified in the Crude Petroleum and Natural Gas Industry or in the Oil and Gas Field Services Industries.

The 1963 census covered a total of 489 thousand producing oil wells, an increase of 3 percent from 1958; and a total of 85 thousand producing gas wells, an increase of 14 percent since 1958. In addition, the report shows 46 thousand oil wells and 9 thousand gas wells shut in during December 1963.

Operators reported 42 thousand wells drilled during 1963 as compared with 47 thousand in 1958. Of the 1963 total, 24 thousand were producing wells and 17 thousand were dry holes and service wells. The total cost of \$2,044 million for drilling and equipping wells was apportioned as follows: oil wells, \$1,027 million; gas wells, \$394 million; and dry holes and service wells \$624 million. Of the total cost for drilling and equipping wells, \$1,020 million was paid to contractors and \$1,024 million was borne by operators of oil and gas field properties. Of the payments to contractors, \$843

million represented payments to drilling contractors and \$177 million represented payments to other contractors. The \$1,024 million borne by operators was distributed as \$481 million for casing, tubing, and well equipment and \$543 million for drilling by own employees and other costs.

COVERAGE

The large number of small operations and the prevalence of operation of properties or drilling for oil and gas under short term agreements and joint ventures in widely scattered areas make coverage by the usual Census techniques unusually difficult. For 1963, as for 1958 and 1954, a supplemental survey of oil and gas field operations was conducted to increase coverage. The totals for 1963 indicate that the Census probably covered about 98 percent of all crude petroleum production and about 96 percent of all natural gas shipped or used. As for 1958, apparent coverage of number of productive wells was somewhat lower, about 90 percent, being least complete for stripper wells and wells on farms. The figures as published for number of wells drilled appear to represent over 95 percent coverage of all drilling during 1963 with approximately 97 percent coverage of oil and gas wells drilled. In general, the differences between coverage for 1963 and that for 1958 amounted to less than one percent for the items considered.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. The final report will include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports are being issued for other industries. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is also being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

Table 1B.--GENERAL STATISTICS FOR THE CRUDE PETROLEUM SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954 ¹
Establishments:				
Total.....	Number.....	12,325	² 10,620	² 10,101
With 20 employees or more.....	...do.....	788	² 975	(NA)
All employees:				
Number.....	Number.....	124,922	164,804	161,282
Payroll.....	Thousand dollars...	879,521	966,780	790,946
Production, development, and exploration workers:				
Number.....	Number.....	71,403	92,398	101,542
Man-hours.....	Thousand.....	142,834	181,325	201,086
Wages.....	Thousand dollars...	426,320	453,243	430,497
Value added in mining.....	...do.....	7,729,882	¹ 6,823,328	5,741,256
Cost of supplies, purchased fuel and electric energy, and contract work.....	...do.....	2,311,713	2,257,489	2,083,668
Contract work only.....	...do.....	1,281,608	1,326,068	1,372,495
Cost of purchased machinery installed.....	...do.....	369,811	444,031	588,211
Value of shipments and receipts.....	...do.....	8,523,233	¹ 7,809,898	6,642,452
Capital expenditures.....	...do.....	1,888,173	1,711,374	1,770,683
Horsepower rating of power equipment.....	Thousand horsepower	10,689	(NA)	8,636

(NA) Not available.

¹Excludes data for Alaska.

²Figures for 1963 and earlier years are not entirely comparable. For 1963, companies made separate reports by districts for Louisiana, Texas, and New Mexico. For these three States in 1963, number of establishments was 5,212, of which 350 had 20 or more employees, and value added was \$4,790 million. Figures for the same items for 1958 were 2,753, 395, and \$4,049 million, respectively.

Table 1C.--GENERAL STATISTICS FOR THE NATURAL GAS SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954 ¹
Establishments:				
Total.....	Number.....	2,051	² 1,390	² 1,407
With 20 employees or more.....	...do.....	164	² 118	(NA)
All employees:				
Number.....	Number.....	17,989	15,317	11,224
Payroll.....	Thousand dollars...	115,099	76,328	44,794
Production, development, and exploration workers:				
Number.....	Number.....	11,704	10,087	8,200
Man-hours.....	Thousand.....	23,070	19,684	15,495
Wages.....	Thousand dollars...	67,008	44,624	29,458
Value added in mining.....	...do.....	1,177,519	516,394	387,957
Cost of supplies, purchased fuel and electric energy, and contract work.....	...do.....	367,465	252,819	134,622
Contract work only.....	...do.....	191,034	129,199	86,312
Cost of purchased machinery installed.....	...do.....	50,062	42,855	32,837
Value of shipments and receipts.....	...do.....	1,289,660	576,008	427,645
Capital expenditures.....	...do.....	305,386	236,260	127,771
Horsepower rating of power equipment.....	Thousand horsepower	1,430	(NA)	487

(NA) Not available.

¹Excludes data for Alaska.

²Figures for 1963 and earlier years are not entirely comparable. For 1963, companies made separate reports by districts for Louisiana, Texas, and New Mexico. For these three States in 1963, number of establishments was 898, of which 88 had 20 or more employees, and value added was \$863 million. Figures for the same items for 1958 were 315, 50, and \$325 million, respectively.

Table 2.—GENERAL STATISTICS FOR THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Subindustry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total.....	14,376	952	142,911	994,620	83,107	165,904	493,988	8,907,401	2,679,178	419,873	9,812,893	2,193,559	180,121	17,339,922
Crude petroleum subindustry....	12,325	788	124,922	879,521	71,403	142,834	426,320	7,729,882	2,311,713	369,811	8,523,233	1,888,173	164,804	16,823,328
Natural gas subindustry...	2,051	164	17,989	115,099	11,704	23,070	67,668	1,177,519	367,465	50,062	1,289,660	305,386	15,317	1516,594
Middle Atlantic, total..	747	31	4,887	25,217	2,966	5,881	13,685	50,207	18,727	3,610	56,270	16,274	5,191	45,906
Crude petroleum subindustry.....	575	15	2,410	12,750	1,579	3,172	6,438	24,897	8,741	658	30,075	4,221	3,624	27,655
Natural gas subindustry.....	172	16	2,477	12,467	1,387	2,709	7,247	25,310	9,986	2,952	26,195	12,053	1,567	18,251
New York, total.....	161	6	859	5,734	494	999	2,422	7,625	3,781	522	8,746	3,182	987	6,725
Crude petroleum subindustry.....	148	5	654	4,216	332	673	1,364	6,485	2,977	209	7,665	2,006	889	5,649
Natural gas subindustry.....	13	1	205	1,518	162	326	1,058	1,140	804	313	1,081	1,176	98	1,076
Pennsylvania, total..	586	25	4,028	19,483	2,472	4,882	11,263	42,582	14,946	3,088	47,524	13,092	4,204	39,181
Crude petroleum subindustry.....	427	10	1,756	8,534	1,247	2,499	5,074	18,412	5,764	449	22,410	2,215	2,735	22,006
Natural gas subindustry.....	159	15	2,272	10,949	1,225	2,383	6,189	24,170	9,182	2,639	25,114	10,877	1,469	17,175
East North Central, total.....	1,670	78	8,077	43,145	6,055	11,684	29,160	282,935	81,900	16,177	334,724	46,288	11,318	256,394
Crude petroleum subindustry.....	1,539	75	7,662	41,140	5,746	11,107	27,668	272,663	76,575	15,517	323,837	40,918	10,685	251,417
Natural gas subindustry.....	131	3	415	2,005	309	577	1,492	10,272	5,325	660	10,887	5,370	633	4,977
Ohio.....	501	13	1,578	7,690	1,088	2,125	4,370	20,175	13,760	2,192	25,742	10,385	3,018	17,649
Indiana.....	277	7	1,042	5,698	630	1,104	2,451	21,795	13,456	1,261	32,672	3,840	1,179	25,323
Illinois.....	684	43	4,270	22,461	3,472	6,662	17,198	187,732	40,305	10,762	217,481	21,318	6,089	195,517
Michigan.....	208	15	1,187	7,296	865	1,793	5,141	53,233	14,379	1,962	58,829	10,745	1,032	17,905
West North Central, total.....	1,256	96	8,448	48,182	6,260	12,632	32,223	442,581	124,850	24,730	512,779	79,382	10,958	384,190
Crude petroleum subindustry.....	1,192	86	7,696	43,205	5,715	11,558	28,615	367,500	114,000	22,622	432,380	71,742	10,430	347,666
Natural gas subindustry.....	64	10	752	4,977	545	1,074	3,608	75,081	10,850	2,108	80,399	7,640	528	36,524
Missouri.....	12	1	208	1,210	5	10	25	166	143	18	292	35	420	(NA)
North Dakota.....	62	3	428	3,903	281	587	1,814	54,454	16,107	4,606	64,665	10,502	558	22,352
South Dakota.....	11	-	3	19	3	10	19	138	1,440	86	536	1,128	(NA)	(NA)
Nebraska.....	121	4	399	2,533	292	576	1,766	48,778	12,983	1,790	56,689	6,862	569	48,869
Kansas, total.....	1,050	88	7,410	40,517	5,679	11,449	28,599	339,045	94,177	18,230	390,597	60,855	9,370	312,879
Crude petroleum subindustry.....	989	78	6,661	35,552	5,137	10,382	25,003	264,649	83,707	16,122	310,294	54,184	(NA)	(NA)
Natural gas subindustry.....	61	10	749	4,965	542	1,067	3,596	74,396	10,470	2,108	80,303	6,671	(NA)	(NA)
South Atlantic, total..	879	20	3,562	15,566	2,712	5,352	11,044	51,888	32,526	4,633	61,371	27,676	3,975	40,498
Crude petroleum subindustry.....	435	6	1,698	7,170	1,256	2,531	4,969	10,539	10,923	1,307	16,257	6,512	1,349	5,996
Natural gas subindustry.....	444	14	1,864	8,396	1,456	2,821	6,075	41,349	21,603	3,326	45,114	21,164	2,626	34,502
Virginia.....	6	-	7	40	6	12	28	766	88	-	827	27	(NA)	(NA)
West Virginia, total..	859	20	3,402	14,410	2,678	5,287	10,861	50,072	31,230	4,549	59,178	26,673	3,789	39,382
Crude petroleum subindustry.....	423	6	1,551	6,086	1,234	2,489	4,846	10,022	10,069	1,257	15,325	6,023	1,204	6,148
Natural gas subindustry.....	436	14	1,851	8,324	1,444	2,798	6,015	40,050	21,161	3,292	43,853	20,650	2,585	33,234
Florida.....	10	-	147	1,084	22	42	123	555	815	(D)	(D)	488	134	(2)
East South Central, total.....	691	42	4,574	26,416	3,107	5,813	15,498	236,153	83,603	12,600	279,977	52,379	5,393	170,708
Crude petroleum subindustry.....	625	38	3,693	21,880	2,413	4,781	12,258	216,881	78,206	11,477	260,294	46,270	4,399	146,556
Natural gas subindustry.....	66	4	881	4,536	694	1,032	3,240	19,272	5,397	1,123	19,683	6,109	994	24,152
Kentucky, total.....	456	20	2,563	11,275	2,093	3,668	8,799	58,698	19,903	4,840	69,300	14,141	3,091	51,640
Crude petroleum subindustry.....	406	17	1,763	7,318	1,441	2,706	5,835	45,747	16,649	3,890	57,358	8,928	2,200	36,186
Natural gas subindustry.....	50	3	800	3,957	652	962	2,964	12,951	3,254	950	11,942	5,213	891	15,454
Alabama.....	27	1	132	857	80	205	462	15,589	8,951	318	20,404	4,454	222	11,357

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Subindustry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
East South Central--Continued														
Mississippi, total.....	197	21	1,871	14,246	931	1,934	6,215	161,697	54,604	7,441	189,972	33,770	2,071	107,714
Crude petroleum subindustry.....	182	20	1,791	13,677	889	1,864	5,939	155,378	52,461	7,268	182,231	32,876	1,972	99,041
Natural gas subindustry.....	15	1	80	569	42	70	276	6,319	2,143	173	7,741	894	99	8,673
West South Central, total.....	7,505	518	88,049	636,659	46,765	94,233	282,860	5,979,572	1,787,524	274,863	6,526,428	1,515,531	112,039	4,654,605
Crude petroleum subindustry.....	6,538	430	79,172	571,445	41,269	82,966	247,920	5,093,226	1,526,038	242,291	5,554,549	1,307,006	105,332	4,344,305
Natural gas subindustry.....	967	88	8,877	65,214	5,496	11,267	34,940	886,346	261,486	32,572	971,879	208,525	6,707	310,300
Arkansas, total.....	212	13	1,235	6,728	919	1,895	4,652	58,189	19,549	3,319	68,682	12,375	1,905	70,497
Crude petroleum subindustry.....	201	11	1,060	5,684	794	1,608	3,954	49,003	15,082	2,718	57,469	9,334	1,803	68,115
Natural gas subindustry.....	11	2	175	1,044	125	287	698	9,186	4,467	601	11,213	3,041	102	2,382
Louisiana, total.....	748	80	16,832	132,328	10,587	22,192	73,069	2,104,468	695,574	94,625	2,242,280	652,387	20,532	1,181,307
Crude petroleum subindustry.....	615	57	14,324	112,680	8,462	17,853	58,540	1,717,167	580,640	77,684	1,828,746	546,745	18,044	1,042,579
Natural gas subindustry.....	133	23	2,508	19,648	2,125	4,339	14,529	387,301	114,934	16,941	413,534	105,642	2,488	138,728
Oklahoma, total.....	1,603	109	18,219	117,355	9,888	18,960	51,993	636,304	216,403	41,706	717,805	176,608	22,933	523,960
Crude petroleum subindustry.....	1,460	103	17,518	112,645	9,494	18,112	49,897	570,339	201,639	40,086	644,260	167,804	22,414	507,573
Natural gas subindustry.....	143	6	701	4,710	394	848	2,096	65,965	14,764	1,620	73,545	8,804	519	16,387
Texas, total.....	4,942	316	51,763	380,248	25,371	51,186	153,146	3,180,611	855,998	135,213	3,497,661	674,161	66,669	2,878,841
Crude petroleum subindustry.....	4,262	259	46,270	340,436	22,519	45,393	135,529	2,756,717	728,677	121,803	3,024,074	583,123	63,071	2,726,038
Natural gas subindustry.....	680	57	5,493	39,812	2,852	5,793	17,617	423,894	127,321	13,410	473,587	91,038	3,598	152,803
Mountain, total.....	1,101	113	11,344	85,204	6,521	13,129	44,447	954,754	285,573	59,848	1,057,799	242,376	14,501	841,883
Crude petroleum subindustry.....	937	89	9,247	72,315	5,125	10,404	36,251	874,141	245,245	53,308	969,221	203,473	12,718	788,708
Natural gas subindustry.....	164	24	2,097	12,889	1,396	2,725	8,196	80,613	40,328	6,540	88,578	38,903	1,783	53,175
Montana, total.....	158	14	1,110	7,788	667	1,291	4,230	59,042	30,032	9,673	73,938	24,809	1,597	63,121
Crude petroleum subindustry.....	149	12	990	7,141	559	1,100	3,639	58,089	29,312	9,592	72,760	24,233	(NA)	(NA)
Natural gas subindustry.....	9	2	120	647	108	191	591	953	720	81	1,178	576	(NA)	(NA)
Wyoming, total.....	205	26	2,918	23,391	1,773	3,585	13,133	334,469	75,190	19,004	364,824	63,839	3,710	272,602
Crude petroleum subindustry.....	195	23	2,797	22,515	1,691	3,409	12,530	318,697	69,496	18,470	348,756	57,907	3,584	264,833
Natural gas subindustry.....	10	3	121	876	82	176	603	15,772	5,694	534	16,068	5,932	126	7,769
Colorado, total.....	236	24	2,633	22,530	1,063	2,155	8,092	104,904	26,660	5,845	118,796	18,613	3,665	132,435
Crude petroleum subindustry.....	199	15	2,208	19,444	813	1,676	6,392	98,567	24,013	5,376	112,351	15,605	3,470	127,094
Natural gas subindustry.....	37	9	425	3,086	250	479	1,700	6,337	2,647	469	6,445	3,008	195	5,341
New Mexico, total.....	420	42	4,206	28,082	2,737	5,531	17,033	368,744	120,724	18,721	401,738	106,451	4,605	314,428
Crude petroleum subindustry.....	335	34	2,877	20,447	1,849	3,792	12,134	316,588	93,505	14,462	343,423	81,132	3,367	280,831
Natural gas subindustry.....	85	8	1,329	7,635	888	1,739	4,899	52,156	27,219	4,259	58,315	25,319	1,238	33,597
Arizona.....	15	-	15	69	10	14	49	258	1,277	65	375	1,225	(NA)	(NA)
Crude petroleum subindustry.....	11	-	11	53	8	10	38	11	1,151	42	73	1,131	(NA)	(NA)
Utah, total.....	67	7	462	3,344	271	553	1,910	87,337	31,690	6,540	98,128	27,439	848	60,521
Crude petroleum subindustry.....	48	5	364	2,715	205	417	1,518	82,189	27,768	5,366	91,858	23,465	(NA)	(NA)
Natural gas subindustry.....	19	2	98	629	66	136	392	5,148	3,922	1,174	6,270	3,974	(NA)	(NA)
Pacific, total.....	527	54	13,970	114,231	8,721	17,180	65,071	909,311	264,475	23,412	983,545	213,653	16,746	¹ 945,738
Crude petroleum subindustry.....	484	49	13,344	109,616	8,300	16,315	62,201	870,035	251,985	22,631	936,620	208,031	16,267	¹ 911,088
Natural gas subindustry.....	43	5	626	4,615	421	865	2,870	39,276	12,490	781	46,925	5,622	479	¹ 34,713
Washington.....	8	2	120	1,111	58	99	553	(²)	(D)	7	(D)	564	108	(NA)
Oregon.....	7	-	11	79	5	13	35	(²)	1,182	3	-	334	22	(NA)
California.....	495	48	13,592	109,890	8,502	16,734	62,489	882,039	(D)	22,694	(D)	181,910	16,535	¹ 940,380
Alaska.....	17	4	247	3,151	156	334	1,994	29,111	(D)	708	(D)	30,845	81	(D)

- Represents zero.

(D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Excludes data for Alaska.²Not shown since the cost of supplies, purchased fuel and electric energy, contract work, and purchased machinery installed exceeds the value of shipments and receipts plus capital expenditures.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
UNITED STATES					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	2,684,638	(X)	¹ 2,367,809	(X)
Shipped.....	..do.....	2,683,123	7,683,894	¹ 2,366,212	¹ 7,082,194
Used in lease operations.....	..do.....	1,515	(X)	1,597	(X)
Natural gas gross production, total.....	Million cu.ft. ²	15,370,080	(X)	¹ 12,152,585	(X)
Gas from oil wells.....	..do.....	4,621,018	(X)	¹ 4,621,018	(X)
Gas from gas wells.....	..do.....	10,749,062	(X)	8,403,475	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	12,649,604	1,949,522	9,453,339	1,190,926
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	831,092	148,049	680,897	103,345
Used in lease operations.....	..do.....	540,363	(X)	562,731	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	1,107,559	(X)	1,184,524	(X)
Net change in underground storage.....	..do.....	5,201	(X)	12,368	(X)
Vented to air, burned in flares, and other losses.....	..do.....	236,261	(X)	¹ 258,726	(X)
MIDDLE ATLANTIC					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	6,826	(X)	8,171	(X)
Shipped.....	..do.....	6,795	29,465	8,163	33,334
Used in lease operations.....	..do.....	31	(X)	8	(X)
Natural gas gross production, total.....	Million cu.ft. ²	96,069	(X)	92,858	(X)
Gas from oil wells.....	..do.....	5,789	(X)	2,483	(X)
Gas from gas wells.....	..do.....	90,280	(X)	90,375	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	59,436	16,084	51,624	13,774
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	29,831	10,032	32,803	10,397
Used in lease operations.....	..do.....	4,508	(X)	2,224	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	266	(X)		
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	2,028	(X)	6,207	(X)
New York					
Crude petroleum, including field condensate and drips, shipped.....	1,000 barrels..	1,886	7,677	1,652	6,692
Natural gas gross production, total.....	Million cu.ft. ²	3,239	(X)	2,959	(X)
Gas from oil wells.....	..do.....	89	(X)	124	(X)
Gas from gas wells.....	..do.....	3,150	(X)	2,835	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³.....	..do.....	3,098	1,034	2,710	991
Used in lease operations; returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	141	(X)	249	(X)
Pennsylvania					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	4,940	(X)	6,511	(X)
Shipped.....	..do.....	4,909	21,788	6,503	26,617
Used in lease operations.....	..do.....	31	(X)	8	(X)
Natural gas gross production, total.....	Million cu.ft. ²	92,830	(X)	89,899	(X)
Gas from oil wells.....	..do.....	5,700	(X)	2,359	(X)
Gas from gas wells.....	..do.....	87,130	(X)	87,540	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³.....	..do.....	86,169	25,082	81,717	23,180
Used in lease operations; returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	6,661	(X)	8,182	(X)
EAST NORTH CENTRAL					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	104,375	(X)	99,957	(X)
Shipped.....	..do.....	104,341	307,820	99,865	297,424
Used in lease operations.....	..do.....	34	(X)	92	(X)
Natural gas gross production, total.....	Million cu.ft. ²	81,258	(X)	56,792	(X)
Gas from oil wells.....	..do.....	32,541	(X)	26,023	(X)
Gas from gas wells.....	..do.....	48,717	(X)	30,769	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	57,591	12,612	29,883	5,774
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	18,445	4,790	15,382	4,442
Used in lease operations.....	..do.....	3,735	(X)	8,604	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	563	(X)	1,433	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	924	(X)	1,490	(X)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
Ohio					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	6,079	418,278	5,328	415,709
Natural gas gross production, total.....	Million cu.ft. ²	34,040	(X)	29,846	(X)
Gas from oil wells.....	..do.....	9,252	(X)	8,285	(X)
Gas from gas wells.....	..do.....	24,788	(X)	21,561	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	28,306	6,442	17,721	3,846
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	5,244	1,212	11,649	3,631
Used in lease operations; returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	490	(X)	476	(X)
Indiana					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	10,883	431,896	10,402	430,980
Natural gas gross production, total.....	Million cu.ft. ²	316	(X)	1,156	(X)
Gas from oil wells.....	..do.....	244	(X)	957	(X)
Gas from gas wells.....	..do.....	72	(X)	199	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³....	..do.....	141	42	467	62
Used in lease operations and vented to air, burned in flares, and other losses.....	..do.....	175	(X)	689	(X)
Illinois					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	71,820	4213,163	76,558	5228,464
Natural gas gross production, total.....	Million cu.ft. ²	14,258	(X)	11,981	(X)
Gas from oil wells.....	..do.....	10,090	(X)	9,964	(X)
Gas from gas wells.....	..do.....	4,168	(X)	2,017	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³....	..do.....	11,899	1,728	4,618	613
Used in lease operations.....	..do.....	1,964	(X)	6,642	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	395	(X)	721	(X)
Michigan					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	15,593	44,483	7,669	22,271
Natural gas gross production, total.....	Million cu. ft. ²	32,644	(X)	13,809	(X)
Gas from oil wells.....	..do.....	12,955	(X)	6,817	(X)
Gas from gas wells.....	..do.....	19,689	(X)	6,992	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	18,033	4,425	7,515	1,301
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	12,413	3,553	3,295	763
Used in lease operations.....	..do.....	1,506	(X)	1,141	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling; and vented to air, burned in flares, and other losses.....	..do.....	692	(X)	1,858	(X)
WEST NORTH CENTRAL					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	151,825	(X)	141,912	(X)
Shipped.....	..do.....	151,744	426,073	141,762	415,794
Used in lease operations.....	..do.....	81	(X)	150	(X)
Natural gas gross production, total.....	Million cu.ft. ²	776,507	(X)	573,744	(X)
Gas from oil wells.....	..do.....	68,042	(X)	49,891	(X)
Gas from gas wells.....	..do.....	708,465	(X)	523,853	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	710,315	80,596	528,306	59,985
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	53,791	8,021	31,175	6,243
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	6,295	(X)	9,311	(X)
Net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	6,106	(X)	4,952	(X)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
North Dakota					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	22,667	⁴ 62,120	13,932	⁵ 40,405
Natural gas gross production ⁶	Million cu.ft. ²	33,184	(X)	15,705	(X)
Disposition:					
Delivered to distributors and transmission companies, and consumers, and net deliveries to natural gas liquids plants ⁶.....	...do.....	31,502	2,674	14,156	1,052
Used in lease operations ⁶.....	...do.....	1,173	(X)	520	(X)
Vented to air, burned in flares, and other losses.....	...do.....	509	(X)	1,029	(X)
Nebraska					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	20,341	⁵ 57,217	17,980	⁵ 52,255
Natural gas gross production.....	Million cu.ft. ²	8,920	(X)	20,484	(X)
Disposition:					
Delivered to distributors and transmission companies, and consumers, and net deliveries to natural gas liquids plants ³.....	...do.....	7,582	1,299	16,629	4,955
Used in lease operations.....	...do.....	1,245	(X)	1,894	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	...do.....	93	(X)	1,961	(X)
Kansas					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	108,486	⁴ 305,942	109,853	⁴ 322,737
Natural gas gross production, total.....	Million cu.ft. ²	734,403	(X)	537,555	(X)
Gas from oil wells.....	...do.....	32,526	(X)	27,805	(X)
Gas from gas wells.....	...do.....	701,877	(X)	509,750	(X)
Disposition:					
Delivered:					
To distributors and transmission companies, and net deliveries to natural gas liquids plants ³.....	...do.....	671,739	76,682	497,857	54,068
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	...do.....	53,283	7,962	30,839	6,153
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	...do.....	3,877	(X)	6,841	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	...do.....	5,504	(X)	2,018	(X)
Missouri and South Dakota					
Crude petroleum, including field condensate and drips, shipped.....	1,000 barrels..	331	794	121	332
SOUTH ATLANTIC					
Crude petroleum, including field condensate and drips.....	...do.....	3,874	(X)	2,520	(X)
Shipped.....	...do.....	3,874	13,027	2,519	8,094
Used in lease operations.....	...do.....	-	(X)	1	(X)
Natural gas gross production, total.....	Million cu.ft. ²	190,589	(X)	184,412	(X)
Gas from oil wells.....	...do.....	11,623	(X)	6,967	(X)
Gas from gas wells.....	...do.....	178,966	(X)	177,445	(X)
Disposition:					
Delivered:					
To distributors and transmission companies, and net deliveries to natural gas liquids plants ³.....	...do.....	153,092	38,374	141,539	31,767
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	...do.....	30,514	9,079	34,910	8,849
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	...do.....	4,437	(X)	7,963	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	...do.....	2,546	(X)		
West Virginia					
Natural gas gross production.....	...do.....	186,818	(X)	177,400	(X)
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³.....	...do.....	180,008	46,462	169,481	38,792
Maryland, Virginia, and Florida					
Natural gas gross production.....	...do.....	3,771	(X)	7,012	(X)
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquid plants ³.....	...do.....	3,598	981	6,968	1,824

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
EAST SOUTH CENTRAL					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	86,177	(X)	59,550	(X)
Shipped.....	..do.....	86,171	237,308	59,538	169,659
Used in lease operations.....	..do.....	6	(X)	12	(X)
Natural gas gross production, total.....	Million cu.ft. ²	288,974	(X)	293,325	(X)
Gas from oil wells.....	..do.....	93,635	(X)	68,208	(X)
Gas from gas wells.....	..do.....	195,339	(X)	225,117	(X)
Disposition:					
Delivered:					
To distributors and transmission companies, and net deliveries to natural gas liquids plants ³.....	..do.....	226,789	43,409	209,385	37,156
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	10,463	1,977	6,912	1,369
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	43,859	(X)	77,028	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	7,863	(X)		
Kentucky					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	18,808	454,244	15,195	45,150
Natural gas gross production, total.....	Million cu.ft. ²	770,081	(X)	70,134	(X)
Gas from oil wells.....	..do.....	7,681	(X)	661	(X)
Gas from gas wells.....	..do.....	69,400	(X)	69,473	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	62,953	13,465	64,028	15,409
To consumers (domestic, commercial, and industrial including deliveries to own refineries).....	..do.....	5,516	1,007	3,410	668
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	7,520	(X)	72,898	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	1,092	(X)		
Tennessee					
Crude petroleum, including field condensate and drips, shipped.....	1,000 barrels..	104	301	6	18
Alabama					
Crude petroleum, including field condensate and drips, shipped.....	..do.....	8,651	22,666	5,373	15,612
Mississippi					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	..do.....	58,614	460,097	38,968	408,854
Natural gas gross production, total.....	Million cu.ft. ²	218,893	(X)	222,695	(X)
Gas from oil wells.....	..do.....	92,954	(X)	67,224	(X)
Gas from gas wells.....	..do.....	125,939	(X)	155,471	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	163,836	29,944	145,319	21,744
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	4,947	970	3,351	596
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	43,339	(X)	74,025	(X)
Vented to air, burned in flares, and other losses.....	..do.....	6,771	(X)		
WEST SOUTH CENTRAL					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	1,669,926	(X)	1,440,112	(X)
Shipped.....	..do.....	1,669,183	4,938,414	1,439,391	4,406,661
Used in lease operations.....	..do.....	743	(X)	721	(X)
Natural gas gross production, total.....	Million cu.ft. ²	11,760,921	(X)	9,116,454	(X)
Gas from oil wells.....	..do.....	3,296,930	(X)	2,594,222	(X)
Gas from gas wells.....	..do.....	8,463,991	(X)	6,522,232	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	9,810,479	1,450,322	7,203,588	843,378
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	578,474	87,550	473,370	55,331
Used in lease operations.....	..do.....	388,300	(X)	385,296	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	800,074	(X)	855,223	(X)
Net change in underground storage.....	..do.....	1,506	(X)	3,675	(X)
Vented to air, burned in flares, and other losses.....	..do.....	182,088	(X)	195,302	(X)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
Arkansas					
Crude petroleum, including field condensate and drips, shipped or used in lease operations.....	1,000 barrels..	20,650	53,946	27,162	477,382
Natural gas gross production, total.....	Million cu.ft. ²	89,180	(X)	47,001	(X)
Gas from oil wells.....	..do.....	47,043	(X)	21,920	(X)
Gas from gas wells.....	..do.....	42,137	(X)	25,081	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	55,606	8,704	33,131	4,347
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	9,790	4,929		
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	21,160	(X)	12,657	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	2,624	(X)	1,213	(X)
Louisiana					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	506,262	(X)	312,747	(X)
Shipped.....	..do.....	506,252	1,554,959	312,733	1,008,107
Used in lease operations.....	..do.....	10	(X)	14	(X)
Natural gas gross production, total.....	Million cu.ft. ²	3,962,007	(X)	2,626,586	(X)
Gas from oil wells.....	..do.....	914,815	(X)	466,525	(X)
Gas from gas wells.....	..do.....	3,047,192	(X)	2,160,061	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	3,403,459	638,005	2,117,749	303,304
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	133,907	23,745	111,882	13,881
Used in lease operations.....	..do.....	130,909	(X)	100,559	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	216,514	(X)	228,798	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	77,218	(X)	67,598	(X)
Oklahoma					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	197,934	(X)	187,835	(X)
Shipped.....	..do.....	197,719	554,456	187,611	552,533
Used in lease operations.....	..do.....	215	(X)	224	(X)
Natural gas gross production, total.....	Million cu.ft. ²	1,212,944	(X)	800,728	(X)
Gas from oil wells.....	..do.....	486,459	(X)	443,297	(X)
Gas from gas wells.....	..do.....	726,485	(X)	357,431	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	1,082,394	142,013	644,946	58,961
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	34,987	5,119		
Used in lease operations and returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	86,124	(X)	131,050	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	9,439	(X)	24,732	(X)
Texas					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	945,080	(X)	912,368	(X)
Shipped.....	..do.....	944,562	2,775,053	911,894	2,768,639
Used in lease operations.....	..do.....	518	(X)	474	(X)
Natural gas gross production, total.....	Million cu.ft. ²	6,496,790	(X)	5,642,139	(X)
Gas from oil wells.....	..do.....	1,848,613	(X)	1,662,480	(X)
Gas from gas wells.....	..do.....	4,648,177	(X)	3,979,659	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	5,269,020	672,687	4,446,621	481,105
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	399,790	53,757	322,629	37,111
Used in lease operations.....	..do.....	221,106	(X)	251,596	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	512,561	(X)	515,859	(X)
Net change in underground storage.....	..do.....	851	(X)	3,675	(X)
Vented to air, burned in flares, and other losses.....	..do.....	93,462	(X)	101,759	(X)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
MOUNTAIN					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	342,700	(X)	304,820	(X)
Shipped.....	..do.....	342,466	905,723	304,544	854,458
Used in lease operations.....	..do.....	234	(X)	276	(X)
Natural gas gross production, total.....	Million cu.ft. ²	1,272,926	(X)	1,073,167	(X)
Gas from oil wells.....	..do.....	519,378	(X)	391,261	(X)
Gas from gas wells.....	..do.....	753,548	(X)	681,906	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	1,106,834	137,344	905,749	91,790
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	37,898	2,908	44,021	5,076
Used in lease operations.....	..do.....	43,927	(X)	33,384	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	69,641	(X)	56,240	(X)
Net change in underground storage.....	..do.....	363	(X)	569	(X)
Vented to air, burned in flares, and other losses.....	..do.....	14,263	(X)	33,204	(X)
Montana					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	29,513	(X)	28,439	(X)
Shipped.....	..do.....	29,448	72,325	28,374	75,523
Used in lease operations.....	..do.....	65	(X)	65	(X)
Natural gas gross production.....	Million cu.ft. ²	25,519	(X)	32,922	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³					
Used in lease operations.....	..do.....	21,653	1,773	30,168	2,098
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	2,919	(X)	1,669	(X)
	..do.....	947	(X)	1,085	(X)
Wyoming					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	133,542	(X)	108,362	(X)
Shipped.....	..do.....	133,494	334,969	108,281	281,969
Used in lease operations.....	..do.....	48	(X)	81	(X)
Natural gas gross production, total.....	Million cu.ft. ²	238,541	(X)	160,092	(X)
Gas from oil wells.....	..do.....	72,298	(X)	62,194	(X)
Gas from gas wells.....	..do.....	166,243	(X)	97,898	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	193,256	28,235	122,080	13,907
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	16,309	860	5,280	493
Used in lease operations.....	..do.....	12,219	(X)	10,831	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	13,259	(X)	13,121	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	3,498	(X)	8,780	(X)
Colorado					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	38,305	(X)	48,194	(X)
Shipped.....	..do.....	38,264	103,404	48,185	143,270
Used in lease operations.....	..do.....	41	(X)	9	(X)
Natural gas gross production, total.....	Million cu.ft. ²	135,359	(X)	132,552	(X)
Gas from oil wells.....	..do.....	68,972	(X)	77,560	(X)
Gas from gas wells.....	..do.....	66,387	(X)	54,992	(X)
Disposition:					
Delivered to distributors, transmission companies, and consumers, and net deliveries to natural gas liquids plants ³					
Used in lease operations.....	..do.....	84,923	10,374	78,503	11,816
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	9,158	(X)	7,978	(X)
	..do.....	41,278	(X)	46,071	(X)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963		1958	
		Quantity	Value (\$1,000)	Quantity	Value (\$1,000)
New Mexico					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	109,196	(X)	95,379	(X)
Shipped.....	..do.....	109,123	311,664	95,297	281,748
Used in lease operations.....	..do.....	73	(X)	82	(X)
Natural gas gross production, total.....	Million cu.ft. ²	781,978	(X)	718,785	(X)
Gas from oil wells.....	..do.....	302,346	(X)	233,878	(X)
Gas from gas wells.....	..do.....	479,632	(X)	484,907	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	750,141	87,098	674,254	63,273
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	7,714	963	21,565	2,681
Used in lease operations.....	..do.....	16,337	(X)	11,715	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	7,786	(X)	11,251	(X)
Utah					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	32,005	483,123	24,437	4 871,915
Natural gas gross production, total.....	Million cu.ft. ²	90,455	(X)	28,816	(X)
Gas from oil wells.....	..do.....	69,653	(X)	21,306	(X)
Gas from gas wells.....	..do.....	20,802	(X)	27,510	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	68,598	10,505	217,920	22,598
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	1,073	161		
Used in lease operations.....	..do.....	3,287	(X)	21,191	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling; net change in underground storage; and vented to air, burned in flares, and other losses.....	..do.....	17,497	(X)	29,705	(X)
Arizona and Nevada					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	139	238	(8)	(8)
Natural gas gross production.....	Million cu.ft. ²	1,074	(X)	(8)	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	1,065	283	(8)	(8)
Used in lease operations.....	..do.....	7	(X)	(8)	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	2	(X)	(8)	(X)
Pacific					
Crude petroleum, including field condensate and drips.....	1,000 barrels..	318,935	(X)	1310,767	(X)
Shipped.....	..do.....	318,549	826,064	1310,430	1896,770
Used in lease operations.....	..do.....	386	(X)	337	(X)
Natural gas gross production, total.....	Million cu.ft. ²	902,836	(X)	1761,833	(X)
Gas from oil wells.....	..do.....	593,080	(X)	1610,055	(X)
Gas from gas wells.....	..do.....	309,756	(X)	151,778	(X)
Disposition:					
Delivered:					
To distributors and transmission companies and net deliveries to natural gas liquids plants ³.....	..do.....	525,068	170,781	383,265	107,302
To consumers (domestic, commercial, and industrial, including deliveries to own refineries).....	..do.....	71,676	23,692	42,324	10,977
Used in lease operations.....	..do.....	80,118	(X)	109,078	(X)
Returned to underground formations for repressuring, pressure maintenance, and cycling.....	..do.....	202,199	(X)	208,710	(X)
Net change in underground storage and vented to air, burned in flares, and other losses.....	..do.....	23,775	(X)	18,456	(X)

- Represents zero. (X) Not applicable. ¹Excludes data for Alaska. ²Represents volumes adjusted to a pressure base of 14.65 pounds absolute at 60°F for 1963, and to 14.73 pounds absolute at 60°F for 1958. ³Respondents were requested to include, besides the value of residue gas, the producers' realization from all products contained in the gas delivered to natural gas liquids plants. ⁴Excludes the value of the small quantity of crude petroleum produced and used in lease operations at the same establishment, amounting to less than 0.1 percent of the total quantity shown. ⁵Excludes the value of the small quantity of crude petroleum produced and used in lease operations at the same establishment, amounting to less than 0.6 percent of the total quantity shown. ⁶Includes data for South Dakota, amounting to less than 0.2 percent of the total shown. ⁷Includes data for Alabama, amounting to less than one-third of the total shown. ⁸Data for Arizona and Nevada are included with those for Utah.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR CRUDE PETROLEUM AND NATURAL GAS SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
Crude petroleum and natural gas.....1963..	126	117
.....1958..	109	108
Crude petroleum.....1963..	121	103
.....1958..	107	108
Natural gas.....1963..	152	132
.....1958..	120	108

Table 30.—NUMBER, FOOTAGE, AND COST OF DRILLING AND EQUIPPING OIL, GAS, DRY, AND SERVICE WELLS IN THE UNITED STATES; 1963, 1958, 1954, AND 1939; AND FOR GEOGRAPHIC AREAS: 1963

(Represents holes drilled and completed during the year by all operators of oil and gas field properties covered in the census whether they are classified in the Crude Petroleum and Natural Gas Industry or in the Oil and Gas Field Services Industries)

Item	United States, total				Middle Atlantic			East North Central				
	1963 ¹	1958 ¹	1954 ¹	1939	Total	New York	Pennsylvania	Total	Ohio	Indiana	Illinois	Michigan
Number of wells drilled, total ²	41,597	46,959	52,327	22,560	820	224	596	4,022	1,065	592	1,757	608
Oil wells ³	19,648	23,755	28,879	17,263	385	124	261	1,627	483	235	777	132
Gas wells ³	4,558	4,526	3,885	1,594	186	17	169	334	211	5	26	92
Dry holes ⁴	14,780	16,355	16,422	3,703	107	35	72	1,690	328	297	696	369
Service wells ⁴	2,611	2,323	3,141	(NA)	142	48	94	371	43	55	258	15
Footage drilled, total.....1,000 ft..	182,430	193,679	210,801	72,191	1,931	359	1,572	9,465	2,955	931	3,893	1,686
Oil wells.....	80,968	⁹² 92,663	117,897	55,837	625	142	483	3,727	1,225	406	1,728	368
Gas wells.....	24,898	24,584	18,510	4,439	736	61	675	971	744	9	47	171
Dry holes.....	71,777	⁶⁷² 72,837	70,213	11,915	321	93	228	4,185	884	454	1,733	1,114
Service wells.....	4,787	3,542	4,181	(NA)	249	63	186	582	102	62	385	33
Average footage drilled per well, all wells.....	4,386	4,124	4,029	3,200	2,355	1,603	2,638	2,353	2,775	1,573	2,216	2,773
Oil wells.....	4,121	⁵³ 3,901	4,082	3,234	1,623	1,145	1,851	2,291	2,536	1,728	2,224	2,788
Gas wells.....	5,462	5,431	4,764	2,785	3,957	3,588	3,994	2,907	3,526	1,800	1,808	1,859
Dry holes.....	4,856	⁶⁴ 4,455	4,276	3,218	3,000	2,657	3,167	2,476	2,695	1,529	2,490	3,019
Service wells.....	1,833	1,524	1,331	(NA)	1,754	1,312	1,979	1,569	2,372	1,127	1,492	2,200
Cost of drilling and equipping wells, total ⁷.....\$1,000..	2,044,265	2,428,803	2,306,947	404,904	13,103	2,825	10,278	59,078	19,427	4,749	23,162	11,740
Per well.....	49.1	51.7	44.1	17.9	16.0	12.6	17.2	14.7	18.2	8.0	13.2	19.3
Per foot.....\$1.00..	11.21	12.54	10.94	5.61	6.79	7.87	6.54	6.24	6.57	5.10	5.95	6.96
Oil wells.....\$1,000..	1,026,719	⁵¹ 1,310,523	1,449,654	330,547	1,900	436	1,464	30,295	9,175	2,773	14,588	3,759
Per well.....	52.3	⁵⁵⁵ 52.2	50.2	19.1	4.9	3.5	5.6	18.6	19.0	11.8	18.8	28.5
Per foot.....\$1.00..	12.68	⁵¹⁴ 14.14	12.30	5.92	3.04	3.07	3.03	8.13	7.49	6.83	8.44	10.21
Gas wells.....\$1,000..	393,803	440,833	263,619	20,926	7,363	688	6,675	7,178	5,086	71	218	1,803
Per well.....	86.4	97.4	67.9	13.1	39.6	40.5	39.5	21.5	24.1	14.2	8.4	19.6
Per foot.....\$1.00..	15.82	17.93	14.24	4.71	10.00	11.28	9.89	7.39	6.84	7.89	4.64	10.54
Dry holes.....\$1,000..	589,195	⁶⁴⁹ 589,342	565,745	53,431	3,202	1,463	1,739	17,892	4,500	1,613	5,698	6,081
Per well.....	39.9	⁶³⁹ 39.7	34.5	14.4	29.9	41.8	24.2	10.6	13.7	5.4	8.2	16.5
Per foot.....\$1.00..	8.21	⁶⁸ 8.92	8.06	4.48	9.98	15.73	7.63	4.28	5.09	3.55	3.29	5.46
Service wells.....\$1,000..	34,548	24,100	27,929	(NA)	638	238	400	3,713	666	292	2,658	97
Per well.....	13.2	10.4	8.9	(NA)	4.5	5.0	4.3	10.0	15.5	5.3	10.3	6.5
Per foot.....\$1.00..	7.22	6.80	6.68	(NA)	2.56	3.78	2.15	6.38	6.53	4.71	6.90	2.94
Amount paid or due contractors for drilling and equipping wells, total.....\$1,000..	1,019,980	⁶¹ 1,005,069	999,805	147,981	7,203	1,779	5,424	31,489	10,512	2,501	10,675	7,801
Oil wells.....	457,343	⁵⁴⁷² 472,686	567,183	116,740	945	272	673	13,056	4,492	1,116	5,707	1,741
Gas wells.....	184,442	169,476	105,517	8,560	3,953	510	3,443	3,411	2,376	44	64	927
Dry holes.....	363,578	⁶³⁵¹ 351,966	314,048	22,681	2,013	873	1,140	13,612	3,211	1,180	4,132	5,089
Service wells.....	14,617	10,941	13,057	(NA)	292	124	168	1,410	433	161	772	44
Payments to drilling contractors including daywork and turnkey, total.....	843,285	(NA)	(NA)	(NA)	6,785	1,579	5,206	28,033	9,215	2,319	9,108	7,391
Oil wells.....	359,380	(NA)	(NA)	(NA)	891	235	656	11,179	4,078	1,001	4,577	1,523
Gas wells.....	145,909	(NA)	(NA)	(NA)	3,760	492	3,268	2,890	1,940	44	61	845
Dry holes.....	327,023	(NA)	(NA)	(NA)	1,843	728	1,115	12,913	2,893	1,128	3,913	4,979
Service wells.....	10,973	(NA)	(NA)	(NA)	291	124	167	1,051	304	146	557	44
Payments to other contractors, total.....	176,695	(NA)	(NA)	(NA)	418	200	218	3,456	1,297	182	1,567	410
Oil wells.....	97,963	(NA)	(NA)	(NA)	54	37	17	1,877	414	115	1,130	218
Gas wells.....	38,533	(NA)	(NA)	(NA)	193	18	175	521	436	-	3	82
Dry holes.....	36,555	(NA)	(NA)	(NA)	170	145	25	699	318	52	219	110
Service wells.....	3,644	(NA)	(NA)	(NA)	1	-	1	359	129	15	215	-
Cost, excluding amount paid or due contractors, total.....	1,024,285	⁶¹ 1,419,729	1,307,142	256,923	5,900	1,046	4,854	27,589	8,915	2,248	12,487	3,939
Oil wells.....	569,376	³ 837,837	882,471	213,807	955	164	791	17,239	4,683	1,657	8,881	2,018
Gas wells.....	209,361	271,357	158,102	12,366	3,410	178	3,232	3,767	2,710	27	154	876
Dry holes.....	225,617	⁶²⁹⁷ 297,376	251,697	30,750	1,189	590	599	4,280	1,289	433	1,566	992
Service wells.....	19,931	13,159	14,872	(NA)	346	114	232	2,303	233	131	1,886	53
Cost of casing, tubing, and well equipment, total.....	481,033	⁵ 686,285	604,796	125,205	2,074	345	1,729	11,345	3,213	1,081	5,588	1,463
Oil wells.....	309,428	⁵⁴⁹⁵ 495,208	495,172	115,579	510	114	396	8,390	2,002	882	4,495	1,011
Gas wells.....	102,491	131,384	67,592	6,022	1,131	29	1,102	1,235	832	9	101	293
Dry holes.....	58,005	⁶⁵² 62,045	33,904	3,604	179	132	47	674	181	126	208	159
Service wells.....	11,109	7,648	8,128	(NA)	254	70	184	1,046	198	64	784	-
All other costs of drilling and equipping, total.....	543,252	⁵ 673,444	702,346	131,718	3,826	701	3,125	16,244	5,702	1,167	6,899	2,476
Oil wells.....	259,948	⁵³⁴² 342,629	387,299	98,228	445	50	395	8,849	2,681	775	4,386	1,007
Gas wells.....	106,870	139,973	90,510	6,344	2,279	149	2,130	2,532	1,878	18	53	583
Dry holes.....	167,612	⁶²⁴⁵ 245,331	217,793	27,146	1,010	458	552	3,606	1,108	307	1,358	833
Service wells.....	8,822	5,511	6,744	(NA)	92	44	48	1,257	35	67	1,102	53
Cost of lease equipment beyond the Christmas tree included above, total.....	133,542	(NA)	(NA)	(NA)	104	12	92	3,013	385	368	2,051	209
Oil wells.....	111,269	(NA)	(NA)	(NA)	47	10	37	2,731	277	342	1,962	150
Gas wells.....	18,368	(NA)	(NA)	(NA)	55	2	53	162	105	2	-	55
Service wells.....	3,905	(NA)	(NA)	(NA)	2	-	2	120	3	24	89	4
Payments to drilling contractors, including day work and turnkey.....	7,495	(NA)	(NA)	(NA)	10	3	7	80	31	5	44	-
Oil wells.....	7,264	(NA)	(NA)	(NA)	10	3	7	73	26	5	42	-
Gas wells.....	206	(NA)	(NA)	(NA)	-	-	-	5	5	-	-	-
Service wells.....	25	(NA)	(NA)	(NA)	-	-	-	2	-	-	2	-
Payments to other contractors.....	26,490	(NA)	(NA)	(NA)	14	-	14	441	19	18	-01	3
Oil wells.....	22,034	(NA)	(NA)	(NA)	-	-	-	414	2	14	395	3
Gas wells.....	4,063	(NA)	(NA)	(NA)	14	-	14	16	16	-	-	-
Service wells.....	393	(NA)	(NA)	(NA)	-	-	-	11	1	4	6	-
Cost of casing, tubing, and well equipment, except payments to contractors for such equipment.....	99,557	(NA)	(NA)	(NA)	80	9	71	2,492	335	345	1,606	206
Oil wells.....	81,971	(NA)	(NA)	(NA)	37	7	30	2,244	249	323	1,525	147
Gas wells.....	14,099	(NA)	(NA)	(NA)	41	2	39	141	84	2	-	55
Service wells.....	3,487	(NA)	(NA)	(NA)	2	-	2	107	2	20	81	4

See footnotes on page 17.

Table 3C.—NUMBER, FOOTAGE, AND COST OF DRILLING AND EQUIPPING OIL, GAS, DRY, AND SERVICE WELLS IN THE UNITED STATES, 1963, 1958, 1954, AND 1939; AND FOR GEOGRAPHIC AREAS: 1963—Continued

Item	West North Central					South Atlantic ¹⁰	East South Central			
	Total	North Dakota	Nebraska	Kansas	Iowa, Missouri, and South Dakota ⁹		Total	Kentucky	Mississippi	Tennessee and Alabama ¹¹
Number of wells drilled, total.....	4,734	163	470	4,069	32	1,086	2,391	1,591	693	107
Oil wells.....	2,104	79	138	1,883	4	233	963	638	257	68
Gas wells.....	219	1	2	216	-	682	181	153	25	3
Dry holes.....	2,012	80	322	1,582	28	148	1,041	607	400	34
Service wells.....	399	3	8	388	-	23	206	193	11	2
Footage drilled, total.....1,000 ft..	15,440	1,026	2,159	12,091	164	2,906	9,315	2,713	5,772	830
Oil wells.....	6,621	543	676	5,377	25	501	3,986	1,128	2,186	672
Gas wells.....	714	(12)	(12)	701	-	1,886	659	441	13,261	157
Dry holes.....	7,478	468	1,458	5,413	139	464	4,428	952	3,325	151
Service wells.....	627	1215	1225	600	-	55	242	192	(13)	(13)
Average footage drilled per well,										
all wells.....	3,262	6,294	4,594	2,971	5,125	2,676	3,896	1,705	8,329	7,757
Oil wells.....	3,147	6,294	4,899	2,856	6,250	2,150	4,139	1,768	8,506	9,882
Gas wells.....	3,260	(12)	(12)	3,245	(X)	2,765	3,641	2,882	13,750	13,400
Dry holes.....	3,717	5,850	4,528	3,422	4,964	3,135	4,254	1,568	8,313	4,441
Service wells.....	1,571	123,750	122,500	1,546	(X)	2,391	1,175	995	(13)	(13)
Cost of drilling and equipping wells,										
total.....\$1,000..	100,809	11,642	10,152	77,363	1,652	29,065	73,363	17,014	46,823	9,526
Per well.....	21.3	71.4	21.6	19.0	51.6	26.8	30.7	10.7	67.6	89.0
Per foot.....\$1.00..	6.53	11.35	4.70	6.40	10.07	10.00	7.88	6.27	8.11	11.48
Oil wells.....\$1,000..	58,370	7,973	5,462	44,510	425	4,022	40,754	8,045	25,329	7,380
Per well.....	27.7	100.9	39.6	23.6	106.3	17.3	42.3	12.6	98.6	108.5
Per foot.....\$1.00..	8.82	14.68	8.08	8.28	17.00	8.03	10.22	7.13	11.59	10.98
Gas wells.....\$1,000..	6,475	(12)	(12)	6,395	-	19,171	6,654	4,220	13,746	13,27
Per well.....	29.6	(12)	(12)	29.6	(X)	28.1	36.8	27.6	13,763	13,54
Per foot.....\$1.00..	9.07	(12)	(12)	9.12	(X)	10.16	10.10	9.57	13,105	13,386
Dry holes.....\$1,000..	32,660	3,507	4,543	23,383	1,227	5,522	24,518	3,651	18,748	2,119
Per well.....	16.2	43.8	14.1	14.8	43.8	37.3	23.6	6.0	46.9	62.3
Per foot.....\$1.00..	4.37	7.49	3.12	4.32	8.83	11.90	5.54	3.84	5.64	14.03
Service wells.....\$1,000..	3,304	12162	12147	3,075	-	350	1,437	1,098	(13)	(13)
Per well.....	8.3	1240.5	1214.7	7.9	(X)	15.2	7.0	5.7	(13)	(13)
Per foot.....\$1.00..	5.27	1210.80	125.88	5.13	(X)	6.36	5.94	5.72	(13)	(13)
Amount paid or due contractors for										
drilling and equipping wells,										
total.....\$1,000..	49,771	5,681	5,250	37,586	1,254	15,618	42,357	9,455	28,276	4,626
Oil wells.....	23,735	3,339	1,899	18,292	205	2,126	18,867	4,260	11,449	3,158
Gas wells.....	3,511	(12)	(12)	3,488	-	10,920	2,950	1,700	13,1461	13,16
Dry holes.....	21,338	2,273	3,289	14,727	1,049	2,528	19,756	2,938	15,366	1,452
Service wells.....	1,187	1269	1262	1,079	-	44	784	557	(13)	(13)
Payments to drilling contractors										
including daywork and turnkey,										
total.....	41,561	4,548	4,778	31,183	1,052	12,436	36,453	7,622	25,218	3,613
Oil wells.....	19,234	2,570	1,588	14,908	168	1,788	15,108	3,143	9,587	2,378
Gas wells.....	2,669	(12)	(12)	2,649	-	8,312	2,534	1,505	13,1231	13,14
Dry holes.....	18,816	1,944	3,130	12,858	884	2,309	18,209	2,588	14,400	1,221
Service wells.....	842	1234	1260	768	-	27	602	386	(13)	(13)
Payments to other contractors,										
total.....	8,210	1,133	472	6,403	202	3,182	5,904	1,833	3,058	1,013
Oil wells.....	4,501	769	311	3,384	37	338	3,759	1,117	1,862	780
Gas wells.....	842	(12)	(12)	839	-	2,608	416	195	13,230	13,2
Dry holes.....	2,522	329	159	1,869	165	219	1,547	350	966	231
Service wells.....	345	1235	12	311	-	17	182	171	(13)	(13)
Cost excluding amount paid or due										
contractors, total.....	51,038	5,961	4,902	39,777	398	13,447	31,006	7,559	18,547	4,900
Oil wells.....	34,635	4,634	3,563	26,218	220	1,896	21,887	3,785	13,880	4,222
Gas wells.....	2,964	(12)	(12)	2,907	-	8,251	3,704	2,520	13,1285	13,11
Dry holes.....	11,322	1,234	1,254	8,656	178	2,994	4,762	713	3,382	667
Service wells.....	2,117	1293	1285	1,996	-	306	653	541	(13)	(13)
Cost of casing, tubing, and well										
equipment, total.....	25,538	3,300	2,491	19,611	136	5,907	14,887	3,776	8,896	2,215
Oil wells.....	20,884	3,056	2,172	15,551	105	1,299	11,798	2,340	7,328	2,130
Gas wells.....	1,516	(12)	(12)	1,487	-	4,268	1,747	1,157	13,646	13,2
Dry holes.....	1,908	171	267	1,439	31	270	1,067	62	922	83
Service wells.....	1,230	1273	1252	1,134	-	70	275	217	(13)	(13)
All other costs of drilling and										
equipping, total.....	25,500	2,661	2,411	20,166	262	7,540	16,119	3,783	9,651	2,685
Oil wells.....	13,751	1,578	1,391	10,667	115	597	10,089	1,445	6,552	2,092
Gas wells.....	1,448	(12)	(12)	1,420	-	3,983	1,957	1,363	13,639	13,9
Dry holes.....	9,414	1,063	987	7,217	147	2,724	3,695	651	2,460	584
Service wells.....	887	1220	1233	862	-	236	378	324	(13)	(13)
Cost of lease equipment beyond the										
Christmas tree included above,										
total.....	9,431	1,595	906	6,871	59	236	3,083	741	2,185	157
Oil wells.....	8,470	1,595	807	6,009	59	82	2,917	658	2,102	157
Gas wells.....	742	-	-	-	-	154	80	2	78	-
Service wells.....	219	-	99	862	-	-	86	81	5	-
Payments to drilling contractors,										
including daywork and turnkey.....	548	1	1	546	-	15	8	8	-	-
Oil wells.....	498	1	1	496	-	10	8	8	-	-
Gas wells.....	43	-	-	43	-	5	-	-	-	-
Service wells.....	7	-	-	7	-	-	-	-	-	-
Payments to other contractors.....	611	87	57	464	3	6	196	16	180	-
Oil wells.....	494	87	22	382	3	2	184	13	171	-
Gas wells.....	84	-	-	-	-	4	7	-	7	-
Service wells.....	33	-	35	82	-	-	5	3	2	-
Cost of casing, tubing, and well										
equipment, except payment to con-										
tractors for such equipment.....	8,272	1,507	848	5,861	56	215	2,879	717	2,005	157
Oil wells.....	7,478	1,507	784	5,131	56	70	2,725	637	1,931	157
Gas wells.....	615	-	-	-	-	145	73	2	71	-
Service wells.....	179	-	64	730	-	-	81	78	3	-

See footnotes on page 17.

Table 3C.—NUMBER, FOOTAGE, AND COST OF DRILLING AND EQUIPPING OIL, GAS, DRY, AND SERVICE WELLS IN THE UNITED STATES; 1963, 1958, 1954, AND 1939, AND FOR GEOGRAPHIC AREAS: 1963—Continued

Item	West South Central					Mountain					Pacific			
	Total	Ar- kansas	Louis- iana ¹	Okla- homa	Texas ¹	Total	Mon- tana	Wyo- ming	Colo- rado	New Mexico	Idaho, Arizona, Utah, and Nevada ¹⁴	Total	Cali- fornia ¹	Wash- ington, Oregon, and Alaska ¹⁵
Number of wells drilled, total.....	22,539	389	4,989	4,276	12,885	3,259	332	911	569	1,219	228	2,746	2,720	26
Oil wells.....	11,057	156	2,427	2,060	6,414	1,219	131	344	99	586	59	2,060	2,052	8
Gas wells.....	2,361	39	576	467	1,279	454	13	63	81	258	39	141	137	4
Dry holes.....	7,845	167	1,952	1,153	4,573	1,404	174	422	373	318	117	533	519	14
Service wells.....	1,276	27	34	596	619	182	14	82	16	57	13	12	12	-
Footage drilled, total.....1,000 ft..	117,117	1,551	36,599	17,613	61,354	16,967	2,046	4,470	2,804	6,466	1,181	9,289	9,050	239
Oil wells.....	53,300	583	14,832	8,413	29,472	6,587	1,021	1,543	515	3,163	345	5,621	5,532	89
Gas wells.....	16,334	251	4,794	2,802	8,487	2,713	139	377	446	1,672	118	885	864	21
Dry holes.....	44,769	670	16,873	5,351	21,875	7,375	936	2,452	1,803	5,536	648	2,757	2,628	129
Service wells.....	2,714	47	100	1,047	1,520	292	(13)	98	40	95	(13)	26	26	-
Average footage drilled per well,														
all wells.....	5,196	3,987	7,336	4,119	4,762	5,206	6,163	4,907	4,928	5,304	5,180	3,383	3,327	9,192
Oil wells.....	4,820	3,737	6,111	4,084	4,595	5,404	7,794	4,485	5,202	5,398	5,847	2,729	2,696	11,125
Gas wells.....	6,918	6,436	8,323	6,000	6,336	5,976	13,296	5,984	5,506	6,481	13,615	6,277	6,307	5,250
Dry holes.....	5,707	4,012	8,644	4,641	4,784	5,253	5,379	5,810	4,834	4,830	5,538	5,173	5,064	9,214
Service wells.....	2,127	1,741	2,941	1,757	2,456	1,604	(13)	1,195	2,500	1,667	(13)	2,167	2,167	-
Cost of drilling and equipping wells,														
total.....\$1,000..	1,387,592	12,808	594,815	171,878	608,091	213,573	24,063	54,814	19,785	93,252	21,659	167,682	148,939	18,743
Per well.....	61.6	32.9	119.2	40.2	47.2	65.5	72.5	60.2	34.8	76.5	95.0	61.1	54.8	720.9
Per foot.....\$1.00..	11.85	8.26	16.25	9.76	9.91	12.59	11.76	12.26	7.06	14.42	18.34	18.05	16.46	78.42
Oil wells.....\$1,000..	681,288	3,757	268,812	88,913	319,806	100,615	14,397	23,967	5,254	49,350	7,647	109,475	104,951	4,524
Per well.....	61.6	24.1	110.8	43.2	49.9	82.5	109.9	69.7	53.1	84.2	129.6	53.1	51.1	565.5
Per foot.....\$1.00..	12.78	6.44	18.12	10.57	10.85	15.27	14.10	15.53	10.20	15.60	22.17	19.48	18.97	50.83
Gas wells.....\$1,000..	289,037	4,696	133,530	34,359	116,452	41,884	131,052	8,134	4,846	25,136	13,848	16,041	14,155	1,886
Per well.....	122.4	120.4	231.8	73.6	91.0	92.3	139.0	129.1	59.8	97.4	137.0	113.8	103.3	471.5
Per foot.....\$1.00..	17.70	18.71	27.85	12.26	13.72	15.44	131.82	21.58	10.87	15.03	120.47	18.13	16.38	89.81
Dry holes.....\$1,000..	396,656	4,001	191,495	42,970	158,190	67,029	8,614	21,374	9,375	17,502	10,164	41,716	29,383	12,333
Per well.....	50.6	24.0	98.1	37.3	34.6	47.7	49.5	50.6	25.1	55.0	86.9	78.3	56.6	880.9
Per foot.....\$1.00..	8.86	5.97	11.35	8.03	7.23	9.09	9.20	8.72	5.20	11.39	15.69	15.13	11.18	95.60
Service wells.....\$1,000..	20,611	354	978	5,636	13,643	4,045	(13)	1,339	310	1,264	(13)	450	450	-
Per well.....	16.2	13.1	28.8	9.5	22.0	22.2	(13)	16.3	19.4	22.2	(13)	37.5	37.5	-
Per foot.....\$1.00..	7.59	7.53	9.78	5.38	8.98	13.85	(13)	13.66	7.75	13.31	(13)	17.31	17.31	-
Amount paid or due contractors for														
drilling and equipping wells,														
total.....\$1,000..	661,397	7,138	257,686	89,929	306,644	118,693	13,603	29,967	12,153	50,522	12,448	93,452	81,159	12,293
Oil wells.....	295,630	1,676	106,307	42,473	145,174	46,483	6,668	10,662	2,028	23,433	3,692	56,501	52,827	3,674
Gas wells.....	126,586	2,310	51,195	17,771	55,310	24,287	13,647	4,012	2,702	15,131	13,246	8,824	7,326	1,498
Dry holes.....	230,369	3,024	99,723	27,214	100,408	46,043	6,288	14,659	7,298	11,288	6,510	27,919	20,798	7,121
Service wells.....	8,812	128	461	2,471	5,752	1,880	(13)	634	125	670	(13)	208	208	-
Payments to drilling contractors														
including daywork and turnkey,														
total.....	548,205	5,869	222,119	72,757	247,460	96,511	11,581	24,631	10,809	39,455	10,035	73,301	62,605	10,696
Oil wells.....	231,712	1,619	83,106	32,441	114,546	36,316	5,333	7,592	19,212	21,212	2,338	43,152	39,478	3,674
Gas wells.....	100,757	1,414	42,117	14,206	43,020	17,547	13,566	3,385	2,277	9,922	11,739	7,440	5,988	1,452
Dry holes.....	209,133	2,738	96,466	24,208	85,721	41,223	5,682	13,197	6,580	9,806	5,958	22,577	17,007	5,570
Service wells.....	6,603	98	430	1,902	4,173	1,425	(13)	457	111	515	(13)	132	132	-
Payments to other contractors,														
total.....	113,192	1,269	35,567	17,172	59,184	22,182	2,022	5,336	1,344	11,067	2,413	20,151	18,554	1,597
Oil wells.....	63,918	57	23,201	10,032	30,628	10,167	1,335	3,070	187	4,221	1,354	13,349	13,349	-
Gas wells.....	25,829	896	9,078	3,565	12,290	6,740	13,81	627	425	5,209	13,507	1,384	1,338	46
Dry holes.....	21,236	286	3,257	3,006	14,687	4,820	606	1,462	713	1,482	532	5,342	3,791	1,551
Service wells.....	2,209	30	31	569	1,579	455	(13)	177	14	155	(13)	76	76	-
Cost excluding amount paid or due														
contractors, total.....	726,195	5,670	337,129	81,949	301,447	94,880	10,460	24,847	7,632	42,730	9,211	74,230	67,780	6,450
Oil wells.....	385,658	2,081	162,505	46,440	174,632	54,132	7,729	13,305	3,226	25,917	3,955	52,974	52,124	850
Gas wells.....	162,451	2,386	82,335	16,588	61,142	17,597	13,405	4,122	2,144	10,003	11,602	7,217	6,829	388
Dry holes.....	166,287	977	91,772	15,756	57,782	20,986	2,326	6,715	2,077	6,214	3,654	13,797	8,585	5,212
Service wells.....	11,799	226	517	3,165	7,891	2,165	(13)	705	185	594	(13)	242	242	-
Cost of casing, tubing, and well														
equipment, total.....	335,548	2,720	147,187	38,524	147,117	46,116	6,307	10,748	3,499	22,058	3,504	39,618	38,117	1,501
Oil wells.....	202,355	1,133	82,635	25,711	92,876	30,988	5,379	7,946	1,703	13,512	2,442	33,204	32,378	826
Gas wells.....	79,245	1,122	37,560	8,246	32,287	9,363	13,279	1,522	1,177	6,202	13,696	3,986	3,617	375
Dry holes.....	47,266	288	26,685	2,960	17,333	4,365	649	889	469	1,992	366	2,276	1,976	300
Service wells.....	6,682	147	307	1,607	4,621	1,400	(13)	391	144	352	(13)	152	152	-
All other costs of drilling and														
equipping, total.....	390,647	2,950	189,942	43,425	154,330	48,764	4,153	14,099	4,133	20,672	5,707	34,612	29,663	4,949
Oil wells.....	183,303	948	79,870	20,729	81,756	23,144	2,350	5,359	1,517	12,405	1,513	19,770	19,746	24
Gas wells.....	83,206	1,234	44,775	8,342	28,855	8,234	13,126	2,600	967	3,803	13,906	3,231	3,218	13
Dry holes.....	119,021	689	65,087	12,796	40,449	16,621	1,677	5,826	1,608	4,222	3,288	11,521	6,509	4,912
Service wells.....	5,117	79	210	1,558	3,270	765	(13)	314	41	242	(13)	90	90	-
Cost of lease equipment beyond the														
Christmas tree included above,														
total.....	90,127	781	31,722	16,340	41,304	13,381	2,589	4,394	1,032	4,394	972	14,167	12,990	1,177
Oil wells.....	72,201	306	25,094	13,580	33,221	11,921	2,586	4,013	885	3,573	864	12,900	12,088	812
Gas wells.....	14,805	470	6,573	2,309	5,453	1,154	-	190	112	744	108	1,216	851	365
Service wells.....	3,121	5	55	431	2,630	306	3	191	35	77	-	51	51	-
Payments to drilling contractors,														
including daywork and turnkey.....	6,631	12	425	5,504	690	144	-	13	-	58	73	59	59	-
Oil wells.....	6,477	10	418	5,410	639	141	-	13	-	55	73	47	47	-
Gas wells.....	139	-	7	91	41	2	-	-	-	2	-	12	12	-
Service wells.....	15	2	-	3	10	1	-	-	-	1	-	-	-	-
Payments to other contractors.....	15,332	24	8,239	1,172	5,897	1,686	59	477	74	918	158	8,204	8,204	-
Oil wells.....	11,544	5	5,882	987	4,670	1,436	59	460	70	703	144	7,960	7,960	-
Gas wells.....	3,486	19	2,349	160	958	237	-	9	2	212	14	215	215	-
Service wells.....	302	-	8	25	269	13	-	8	2	3	-	29	29	-
Cost of casing, tubing, and well														
equipment, except payment to con-														
tractors for such equipment.....	68,164	745	23,058	9,644	34,717	11,551	2,530	3,904	958	3,418	741	5,904	4,727	1,1

Footnotes for table 3C.—1311

- Represents zero. (NA) Not available. (X) Not applicable.

¹Includes the number, footage, and costs for offshore wells for which separate statistics have been published in report M1063(F)-13B-2 of this series. For 1954, excludes data for Alaska.

²Represents wells drilled which were completed during the year, wells completed during the year although begun in the previous year, and wells drilled and abandoned before completion during the year.

³For wells that produced both oil and gas, respondents were requested to classify the wells according to the more valuable total product. They were requested to classify "distillate" wells as oil wells if the value of all liquids produced was greater than the value of gas produced; but otherwise to classify them as gas wells.

⁴Dry holes represent wells drilled and abandoned without commercial production during the year. Service wells include gas-injection, water-injection, and brine-disposal wells.

⁵Excludes data for 1 oil well in Alaska.

⁶Excludes data for 4 dry holes in Alaska.

⁷Represents cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials; includes machinery and tool charges or rentals but not the value of material salvaged after use. Represents only the tangible costs specified; respondents were asked to exclude taxes, interest on investment, overhead costs, etc.

⁸Includes the cost of delivering and installing equipment. Excludes the value of equipment that was salvaged and was used again, but includes the cost of salvaging. Includes tubing, wellhead fittings, gas traps, flow tanks, oil and gas separators, etc., and drilling derricks retained over wells after completion and special-production derricks.

⁹Represents South Dakota, 1 dry hole in Iowa, and 2 dry holes in Missouri.

¹⁰Represents West Virginia and 1 dry hole in Florida. See also footnote 1.

¹¹Represents Alabama and 3 oil wells, 1 gas well, 19 dry holes, and 2 service wells in Tennessee.

¹²Figures for gas wells are included with those for service wells.

¹³Figures for service wells are included with those for gas wells.

¹⁴Represents Utah; 1 dry hole each in Idaho and Nevada; and 1 oil well, 7 gas wells, and 10 dry holes in Arizona.

¹⁵Represents Alaska, 2 dry holes in Washington, and 1 dry hole in Oregon. See also footnote 1.

Table 3D.—NUMBER OF OIL AND GAS WELLS PRODUCING AND SHUT-IN, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	Number of wells in December 1963				Number of wells in December 1958			
	Oil wells ¹		Gas wells ¹		Oil wells ¹		Gas wells ¹	
	Producing	Shut-in	Producing	Shut-in	Producing	Shut-in	Producing	Shut-in
United States, total.....	488,846	46,310	85,426	9,384	472,838	38,825	74,747	7,919
Middle Atlantic, total.....	40,402	3,127	15,129	985	59,442	6,324	16,680	688
New York.....	8,962	689	890	25	13,066	875	979	5
Pennsylvania.....	31,440	2,438	14,239	960	46,376	5,449	15,701	683
East North Central, total.....	41,385	4,623	3,806	267	42,583	3,375	4,598	130
Ohio.....	9,121	418	3,467	63	8,657	368	4,247	83
Indiana.....	4,745	256	73	62	4,238	181	143	5
Illinois.....	23,686	3,599	31	41	26,075	2,736	31	17
Michigan.....	3,833	350	235	101	3,613	90	177	25
West North Central, total.....	41,465	2,833	5,665	266	39,673	1,904	5,243	270
Iowa.....	-	1	-	-	-	-	-	-
Missouri.....	77	3	-	-	125	-	3	-
North Dakota.....	1,338	158	6	-	1,142	68	10	-
South Dakota.....	23	1	23	-	3	2	-	-
Nebraska.....	1,673	363	54	15	1,170	95	55	7
Kansas.....	38,354	2,307	5,582	251	37,233	1,739	5,175	263
South Atlantic, total.....	7,331	542	14,732	987	9,357	589	14,672	524
Maryland.....	-	-	29	4	-	-	35	1
Virginia.....	-	-	95	59	5	-	80	56
West Virginia.....	7,315	542	14,608	924	9,341	589	14,557	467
Florida.....	16	-	-	-	11	-	-	-
East South Central, total.....	17,068	1,491	5,510	319	17,058	524	4,255	281
Kentucky.....	13,870	1,095	4,686	228	14,919	335	3,964	232
Tennessee.....	34	2	1	-	6	-	19	1
Alabama.....	468	19	468	2	237	3	1	-
Mississippi.....	2,696	375	355	89	1,896	186	271	48
West South Central, total.....	275,827	22,221	31,330	5,282	247,132	16,988	22,228	5,158
Arkansas.....	3,969	473	252	131	4,473	328	218	69
Louisiana.....	24,715	2,946	6,692	1,613	18,084	1,740	4,743	1,279
Oklahoma.....	65,988	6,114	5,829	667	61,266	6,100	3,889	845
Texas.....	181,155	12,688	18,557	2,871	163,309	8,820	13,378	2,965
Mountain, total.....	26,881	3,786	8,246	949	22,920	2,541	6,476	704
Montana.....	3,406	563	934	56	3,510	309	1,142	45
Wyoming.....	6,651	1,737	704	220	6,113	1,384	295	178
Colorado.....	1,880	338	573	185	2,105	335	325	144
New Mexico.....	14,165	1,061	5,875	406	10,651	481	4,665	302
Arizona.....	5	2	11	7	1	1	2	7
Utah.....	772	80	149	75	538	30	47	28
Nevada.....	2	5	-	-	2	1	-	-
Pacific, total.....	38,487	7,687	1,008	329	34,673	6,580	595	164
Washington.....	-	-	-	-	1	-	-	-
California.....	38,433	7,685	997	323	34,670	6,580	595	164
Alaska.....	54	2	11	6	2	-	-	-

- Represents zero.

¹See table 3C, footnote 3.

PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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U.S. DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON, D.C. 20233

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U.S. DEPARTMENT OF COMMERCE

1963 CENSUS OF MINERAL INDUSTRIES

MIG3(P)-13B-1



INDUSTRY SERIES

Crude petroleum and natural gas

SIC Code 1311

**preliminary
report**

Part II: 200 Largest Companies

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, shipments and receipts of the 200 largest companies in the Crude Petroleum and Natural Gas Industry were valued at \$8,076 million, an increase of 16 percent over 1958, according to preliminary results obtained from the 1963 census.

Average employment in this industry for these companies showed a decrease of 13 percent from 1958 to a total of 112,589 employees in 1963. Value added in mining amounted to \$7,538 million in 1963, an increase of 19 percent from 1958. The cost of drilling and equipping wells completed in 1963 by these companies was \$1,488 million, a decrease of 7 percent from 1958. The footage drilled decreased between 1958 and 1963 by 4 percent to a total footage of 92,701 thousand in 1963. The average footage drilled per well increased for the same period from 5,556 to 5,612 while the average cost per well for drilling and equipping decreased from \$91.9

Table 1.—GENERAL STATISTICS FOR THE 200 LARGEST COMPANIES IN THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY IN THE UNITED STATES FOR 1963 AND 1958; AND FOR ALL COMPANIES, 1958

(Companies were ranked by size on the basis of their total value of shipments and receipts in the census year)

Item	Unit of measure	1963	1958		
		200 largest companies	200 largest companies	All companies in the industry	200 largest as percent of all companies
Establishments.....	Number.....	1,902	1,180	12,010	19.8
All employees:					
Number.....	Number.....	112,589	128,683	180,121	71.4
Payroll.....	Thousand dollars.	907,299	831,181	1,043,108	79.7
Production, development, and exploration workers:					
Number.....	Number.....	52,276	62,596	102,485	61.1
Man-hours.....	Thousand.....	106,635	128,194	201,009	63.8
Wages.....	Thousand dollars.	361,747	355,547	497,867	71.4
Value added in mining.....	...do.....	7,537,639	6,327,753	27,339,922	86.2
Cost of supplies, gas purchased for gas lift and repressuring, purchased fuel and electric energy, and contract work.....	...do.....	2,064,291	1,902,865	2,510,308	75.8
Contract work only.....	...do.....	1,121,663	1,111,170	1,455,267	76.4
Cost of purchased machinery installed.....	...do.....	337,142	358,587	486,886	73.6
Value of shipments and receipts.....	...do.....	8,075,855	6,943,417	28,385,906	82.8
Crude petroleum, including field condensates and drips, only....	...do.....	6,226,266	5,789,784	27,038,575	82.3
Natural gas only.....	...do.....	1,801,969	1,131,987	1,286,454	88.0
Capital expenditures.....	...do.....	1,863,217	1,645,788	1,947,634	84.5

¹The 1958 figures for number of establishments are not very comparable, for large companies, with those for 1963, since for the first time for 1963 companies were asked to make separate reports by districts for the States of Louisiana, Texas, and New Mexico.

²Excludes data for 17 establishments in Alaska with principal expenses amounting to \$7,774 thousand.

April 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



thousand to \$90.1 thousand and the average cost per foot decreased from \$16.55 to \$16.05

The 200 companies included in this tabulation in each year were determined by ranking all companies by size on the basis of their total value of shipments and receipts in the census year. Preliminary figures indicate that these companies accounted for approximately 88 percent of the total value added in the industry for 1963, 74 percent of all employees, and about 15 percent of all establishments. Corresponding factors for 1958 are shown in tables 1 and 3B.

The Crude Petroleum and Natural Gas Industry represents establishments engaged primarily in operating oil and gas field properties. Such activities include exploration for crude petroleum and natural gas; drilling, completing, and equipping wells; the operation of separators, emulsion breakers, desilting equipment; and all other activities incident to making oil and gas marketable up to the point of shipment from the producing property. This industry also includes the production of oil through the mining and extraction of oil from oil shale and oil sands. Establishments primarily engaged in performing oil and gas field services for operators on a contract, fee, or other basis are classified in Group 138, Oil and Gas Field Services.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report.

For oil and gas field operations, an establishment represents all oil and gas field operations of a reporting company in one State except for Louisiana, Texas, and New Mexico, where an establishment represents operations of a reporting company in a district.

The Crude Petroleum and Natural Gas Industry includes establishments performing oil and gas field services for others whose value of shipments of oil and gas was greater than the receipts for services. Companies were permitted, however, to prepare separate reports for their service activities and their oil and gas production; and a few companies prepared such separate reports.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent

the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers, based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in Part I of this report and in the final census reports. The final report will include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports are being issued for other industries. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is also being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a Census of Mineral Industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS BY GEOGRAPHIC AREAS
(Not tabulated separately for the 200 largest companies)

Table 3A.—QUANTITY AND VALUE OF PRIMARY PRODUCTS
(Not completely tabulated for the 200 largest companies. For value of such products see table 1)

Table 3B.—NUMBER, FOOTAGE, AND COST OF DRILLING AND EQUIPPING OIL, GAS, DRY, AND SERVICE WELLS FOR THE 200 LARGEST COMPANIES IN THE CRUDE PETROLEUM AND NATURAL GAS INDUSTRY, 1963 AND 1958; AND FOR ALL COMPANIES, 1958

(Companies were ranked by size on the basis of their total value of shipments and receipts in the census year)

Item	Unit of measure	1963	1958		
		200 largest companies	200 largest companies	All companies	200 largest as percent of all companies
Number of wells drilled, total ¹	Number.....	16,518	17,327	44,692	38.8
Oil wells ².....	...do.....	8,951	9,409	22,941	41.0
Gas wells ².....	...do.....	2,161	2,662	4,426	60.1
Dry holes ³.....	...do.....	4,083	4,093	15,002	27.3
Service wells ³.....	...do.....	1,323	1,163	2,323	50.1
Footage drilled, total.....	Thousand feet....	92,701	96,276	186,041	51.7
Oil wells.....	...do.....	47,200	51,570	490,437	57.0
Gas wells.....	...do.....	14,910	16,433	24,166	68.0
Dry holes.....	...do.....	28,046	26,251	567,843	38.7
Service wells.....	...do.....	2,545	2,022	3,542	57.1
Average footage drilled per well, all wells.....	Feet.....	5,612	5,556	4,163	(X)
Oil wells.....	...do.....	5,273	5,481	43,942	(X)
Gas wells.....	...do.....	6,900	6,173	5,460	(X)
Dry holes.....	...do.....	6,869	6,414	54,522	(X)
Service wells.....	...do.....	1,924	1,739	1,525	(X)
Cost of drilling and equipping wells, total ⁶	Thousand dollars.	1,488,210	1,593,208	2,375,464	67.1
Per well.....	...do.....	90.1	91.9	53.2	(X)
Per foot.....	Dollars.....	16.05	16.55	12.77	(X)
Oil wells.....	Thousand dollars.	767,707	868,535	41,291,379	67.3
Per well.....	...do.....	85.8	92.3	456.3	(X)
Per foot.....	Dollars.....	16.26	16.84	414.28	(X)
Gas wells.....	Thousand dollars.	301,998	345,056	434,889	79.3
Per well.....	...do.....	139.7	129.6	98.3	(X)
Per foot.....	Dollars.....	20.25	21.00	18.00	(X)
Dry holes.....	Thousand dollars.	390,021	362,535	4621,091	58.4
Per well.....	...do.....	95.5	88.6	441.4	(X)
Per foot.....	Dollars.....	13.91	13.81	49.15	(X)
Service wells.....	Thousand dollars.	28,484	17,082	24,100	70.9
Per well.....	...do.....	21.5	14.7	10.4	(X)
Per foot.....	Dollars.....	11.19	8.45	6.80	(X)

(X) Not applicable.

¹Represents wells drilled which were completed during the year, wells completed during the year although begun in the previous year, and wells drilled and abandoned before completion during the year.

²For wells that produced both oil and gas, respondents were requested to classify the wells according to the more valuable total product. They were requested to classify "distillate" wells as oil wells if the value of all liquids produced was greater than the value of gas produced; but otherwise to classify them as gas wells.

³Dry holes represent wells drilled and abandoned without commercial production during the year. Service wells include gas-injection, water-injection, and brine-disposal wells.

⁴Excludes data for 1 oil well in Alaska.

⁵Excludes data for 4 dry holes in Alaska.

⁶Represents cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials; includes machinery and tool charges or rentals but not the value of material salvaged after use. Represents only the tangible costs specified; respondents were asked to exclude taxes, interest on investment, overhead costs, etc.

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1963 CENSUS OF MINERAL INDUSTRIES

1965

MIC63(P)-13B-1

CHANGE SHEET
FOR PRELIMINARY REPORT
CRUDE PETROLEUM AND NATURAL GAS
(SIC Code 1311)

Part II: 200 Largest Companies

The following correction should be made to the above recently published report:

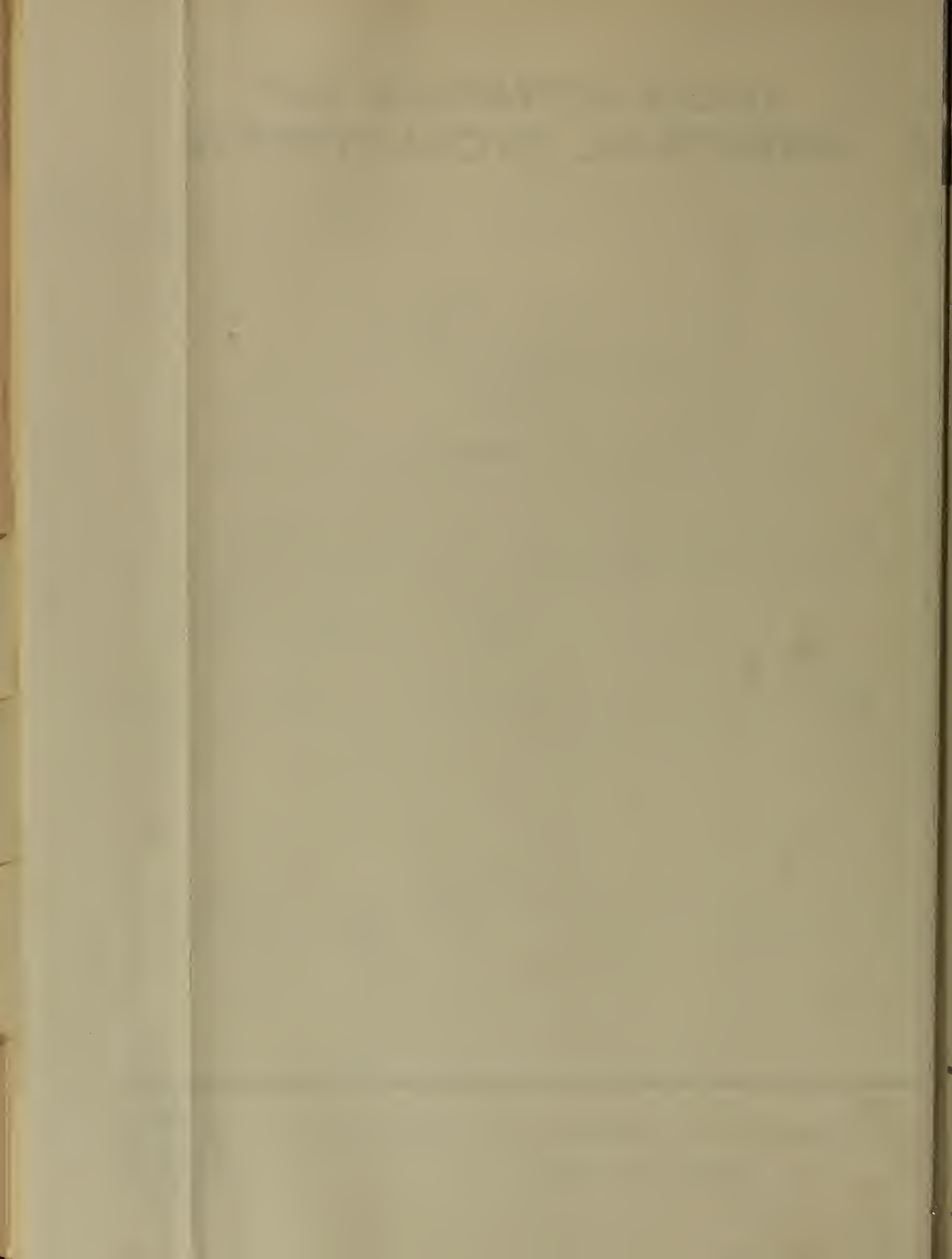
Table 1.—GENERAL STATISTICS FOR THE 200 LARGEST COMPANIES IN THE CRUDE PETROLEUM AND NATURAL GAS
INDUSTRY IN THE UNITED STATES FOR 1963 AND 1958; AND FOR ALL COMPANIES, 1958

Item	Unit of measure	1963	
		200 largest companies	
		As published	As revised
All employees:			
Number.....	Number.....	112,589	98,439
Payroll.....	Thousand dollars	907,299	781,870

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS





1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-13B-2

INDUSTRY SERIES

preliminary
report

Offshore oil and gas

SIC Code 1311 (part)

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a 1963 final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, shipments of crude petroleum from offshore operations were 175 million barrels, an increase of 199 percent from 1958, and production of offshore gas amounted to 767 billion cubic feet, an increase of 233 percent from 1958, according to preliminary results obtained from the 1963 census. The cost of drilling and equipping offshore wells completed in 1963 was \$265 million, an increase of 45 percent from 1958. The footage drilled increased between 1958 and 1963 by 90 percent to a total footage of 7,582 thousand in 1963. The average footage drilled per well increased for the same period from 9,645 to 10,724 but the average cost per well for drilling and equipping decreased from \$443 thousand to \$375 thousand.

For Census purposes, an offshore well is defined as one which is bottomed at, or produces from, a point which lies seaward from the normal or ordinary coast line. The term does not apply to wells drilled to and producing from points underlying inland waters. The classification differs somewhat from classifications sometimes used which include all wells located in blocks in which the predominant completions are offshore or which are accorded offshore allowables in a particular year. Such statistics include some inshore wells.

PUBLICATION PROGRAM

More detailed figures for offshore oil and gas operations, including offshore employment, will appear in the final report for the crude petroleum and natural gas industry. Preliminary and final reports for this and other industries will be issued during the coming months. A series of preliminary summary reports showing totals for each mining industry and for each State is also being issued. Final industry reports, final summary reports, and area reports will be published during the spring and summer of 1965. Order forms which list these reports and their prices may be obtained from local U.S. Department of Commerce Field Offices or by writing to: Bureau of the Census; Washington, D.C. 20233.

BACKGROUND

The 1963 Census of Mineral Industries is the fifteenth such Census in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



1963 CENSUS OF MINERAL INDUSTRIES

OFFSHORE OPERATIONS: NUMBER OF WELLS; PRODUCTION; AND NUMBER, FOOTAGE, AND COSTS OF DRILLING AND EQUIPPING OIL AND GAS WELLS AND DRY HOLES; BY GEOGRAPHIC DIVISIONS: 1963, 1958, AND 1954

Item	Unit of measure	United States, total			South		Pacific	
		1963	1958	1954	1963 ¹	1958	1963 ²	1958
Number of establishments operating producing wells or drilling wells for own account.....	Number.....	49	41	25	39	35	10	6
Number of wells producing during December, total ³.....	..do.....	2,708	1,705	(NA)	2,232	951	476	754
Oil wells.....	..do.....	2,321	1,599	(NA)	1,858	845	463	754
Gas wells.....	..do.....	387	106	(NA)	374	106	13	-
Crude petroleum, including field condensate and drips shipped and used in lease operations ⁴	1,000 bbls....	174,715	58,487	28,727	143,945	39,583	30,770	18,904
Natural gas produced, total.....	Million cu. ft.	767,479	230,622	77,759	715,617	(D)	51,862	(D)
From oil wells.....	..do.....	278,717	72,552	21,655	254,503	(D)	24,214	(D)
From gas wells.....	..do.....	488,762	158,070	56,104	461,114	158,070	27,648	-
Number of wells drilled, total.....	Number.....	707	414	248	660	373	47	41
Oil wells ³.....	..do.....	355	243	184	321	206	34	37
Gas wells ³.....	..do.....	92	64	28	88	64	4	-
Dry holes.....	..do.....	260	107	36	251	103	9	4
Footage drilled, total.....	1,000 feet....	7,582	3,993	2,217	7,292	3,822	290	171
Oil wells.....	..do.....	3,694	2,146	1,529	3,509	(D)	185	(D)
Gas wells.....	..do.....	1,183	726	309	726	{ 726	{ 105	{ (D)
Dry holes.....	..do.....	2,705	1,121	379	3,783	(D)	(D)	(D)
Average footage drilled per well, all wells.....	Feet.....	10,724	9,645	8,940	11,048	10,247	6,170	4,171
Oil wells.....	..do.....	10,406	8,831	8,310	10,931	(D)	5,441	(D)
Gas wells.....	..do.....	12,859	11,344	11,036	(D)	11,344	(D)	-
Dry holes.....	..do.....	10,404	10,477	10,528	(D)	(D)	(D)	(D)
Cost of drilling and equipping wells, total ⁵	\$1,000.....	264,799	183,091	68,385	245,387	178,209	19,412	4,882
Per well.....	..do.....	374.5	442.7	275.7	371.8	477.8	413.0	119.1
Per foot.....	..do.....	34.92	45.90	30.85	33.65	46.63	66.94	28.55
Oil wells.....	\$1,000.....	124,224	94,633	36,598	112,026	(D)	12,198	(D)
Per well.....	..do.....	349.9	389.4	198.9	349.0	(D)	358.8	(D)
Per foot.....	..do.....	33.63	44.10	23.94	31.93	(D)	65.94	(D)
Gas wells.....	\$1,000.....	57,824	43,338	16,749	(D)	43,338	(D)	-
Per well.....	..do.....	628.5	677.2	598.2	(D)	677.2	(D)	-
Per foot.....	..do.....	48.88	59.69	54.20	(D)	59.69	(D)	-
Dry holes.....	\$1,000.....	82,751	45,120	15,038	(D)	(D)	(D)	(D)
Per well.....	..do.....	318.3	421.7	417.7	(D)	(D)	(D)	(D)
Per foot.....	..do.....	30.59	40.25	39.68	(D)	(D)	(D)	(D)
Amount paid or due contractors for drilling or equipping wells, total.....	\$1,000.....	135,127	61,122	16,495	121,717	59,570	13,410	1,552
Oil wells.....	..do.....	57,371	29,325	9,066	49,971	(D)	7,400	(D)
Gas wells.....	..do.....	26,257	14,636	3,512	14,636	{ 14,636	{ 6,010	{ (D)
Dry holes.....	..do.....	51,499	17,161	3,917	71,746	(D)	(D)	(D)
Payments to drilling contractors including daywork and turnkey, total.....	..do.....	107,616	(NA)	(NA)	97,634	(NA)	9,982	(NA)
Oil wells.....	..do.....	42,642	(NA)	(NA)	37,502	(NA)	5,140	(NA)
Gas wells.....	..do.....	21,136	(NA)	(NA)	60,132	{ (NA)	{ 4,842	{ (NA)
Dry holes.....	..do.....	43,838	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Payments to other contractors, total.....	..do.....	27,511	(NA)	(NA)	24,083	(NA)	3,428	(NA)
Oil wells.....	..do.....	14,729	(NA)	(NA)	12,469	(NA)	2,260	(NA)
Gas wells.....	..do.....	5,121	(NA)	(NA)	11,614	{ (NA)	{ 1,168	{ (NA)
Dry holes.....	..do.....	7,661	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Cost, excluding amount paid contractors, total.....	..do.....	129,672	121,969	51,890	123,670	118,639	6,002	3,330
Oil wells.....	..do.....	66,853	65,308	27,532	62,055	(D)	4,798	(D)
Gas wells.....	..do.....	31,567	28,702	13,237	61,615	{ 28,702	{ 1,204	{ (D)
Dry holes.....	..do.....	31,252	27,959	11,121	(D)	(D)	(D)	(D)
Cost of casing, tubing, and well equipment, total ⁶.....	..do.....	57,020	36,139	12,298	53,351	34,814	3,669	1,325
Oil wells.....	..do.....	33,708	24,752	9,249	31,048	(D)	2,660	(D)
Gas wells.....	..do.....	14,318	7,985	1,944	22,303	{ 7,985	{ 1,009	{ (D)
Dry holes.....	..do.....	8,994	3,402	1,105	(D)	(D)	(D)	(D)
All other costs of drilling and equipping, total.....	..do.....	72,652	85,830	39,592	70,319	83,825	2,333	2,005
Oil wells.....	..do.....	33,145	40,556	18,283	31,007	(D)	2,138	(D)
Gas wells.....	..do.....	17,249	20,717	11,293	39,312	{ 20,717	{ 195	{ (D)
Dry holes.....	..do.....	22,258	24,557	10,016	(D)	(D)	(D)	(D)
Cost of lease equipment beyond the Christmas tree included above, total.....	..do.....	16,781	(NA)	(NA)	14,283	(NA)	2,498	(NA)
Oil wells.....	..do.....	13,044	(NA)	(NA)	(D)	(NA)	(D)	(NA)
Gas wells.....	..do.....	3,737	(NA)	(NA)	(D)	(NA)	(D)	(NA)
Payments to contractors, total.....	..do.....	5,873	(NA)	(NA)	3,933	(NA)	1,940	(NA)
Oil wells.....	..do.....	4,184	(NA)	(NA)	(D)	(NA)	(D)	(NA)
Gas wells.....	..do.....	1,689	(NA)	(NA)	(D)	(NA)	(D)	(NA)
Cost of casing, tubing, and well equipment, except payment to contractors for such equipment, total.....	..do.....	10,908	(NA)	(NA)	10,350	(NA)	558	(NA)
Oil wells.....	..do.....	8,860	(NA)	(NA)	(D)	(NA)	(D)	(NA)
Gas wells.....	..do.....	2,048	(NA)	(NA)	(D)	(NA)	(D)	(NA)

D Withheld to avoid disclosing figures for individual companies. NA not available.

¹Numbers of establishments were 1 in Florida, 26 in Louisiana, and 12 in Texas. Numbers and types of wells drilled were: One dry hole in Florida; 320 oil wells, 86 gas wells, and 244 dry holes in Louisiana; 1 oil well, 2 gas wells, and 6 dry holes in Texas. For Louisiana, total footage drilled for all wells was 7,206 thousand feet. Total cost for drilling and equipping these wells in Louisiana was \$242,021 thousand with the following breakdown: Payments to drilling contractors, \$96,104 thousand; payments to other contractors, \$23,855 thousand; cost of casing, tubing, and well equipment, except payments to contractors for such equipment, \$52,408 thousand; all other costs of drilling and equipping, \$69,654 thousand.

²Represents 9 establishments in California and 1 in Alaska. One oil well was drilled in Alaska. The remainder of the drilling was done in California.

³For wells that produced both oil and gas, respondents were requested to classify wells according to the more valuable total product.

⁴For 1963, 1958, and 1954, crude petroleum used in lease operations amounted to less than 0.1 percent of the production of crude petroleum.

⁵Represents cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials; includes machinery and tool charges or rentals, but not the value of material salvaged after use. Represents only the tangible costs specified; respondents were asked to exclude taxes, interest on investment, overhead costs, etc.

⁶Includes the cost of delivering and installing equipment. Excludes the value of equipment that was salvaged and was used again, but includes the cost of salvaging. Includes tubing, wellhead fittings, gas traps, flow tanks, oil and gas separators, etc., and drilling derricks retained over wells after completion and special-production derricks.

1963 CENSUS OF MINERAL INDUSTRIES

MI63(P)-13C

INDUSTRY SERIES

Natural gas liquids

SIC Code 1321

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The data will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Natural Gas Liquids Industry shipped products valued at \$2,940 million, an increase of 81 percent over 1958, according to preliminary results obtained from the 1963 census. This shipments figure represents the value of natural gas liquids shipped and also the value of residue gas and secondary products shipped.

Table 1.—GENERAL STATISTICS FOR THE NATURAL GAS LIQUIDS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	650	593	562	¹ 736
With 20 employees or more.....	...do.....	244	290	287	(NA)
All employees:					
Number.....	Number.....	13,741	16,514	17,340	10,337
Payroll.....	Thousand dollars...	96,362	96,319	85,057	18,264
Production and related workers:					
Number.....	Number.....	12,103	13,445	13,560	8,332
Man-hours.....	Thousand.....	24,726	26,947	27,862	16,634
Wages.....	Thousand dollars...	81,861	75,739	63,983	13,212
Value added in mining.....	...do.....	783,966	587,580	(NA)	(NA)
Cost of supplies, natural gas processed, natural gas liquids received for further processing, crude petroleum including condensate received for processing, purchased fuel and electric energy, and contract work.....	...do.....	2,239,043	² 1,092,612	³ 143,327	⁴ 19,592
Natural gas processed only.....	...do.....	1,883,249	850,356	(NA)	(NA)
Natural gas liquids received for further processing only..	...do.....	223,575	142,030	57,556	(NA)
Crude petroleum, including condensate, received for processing only.....	...do.....	22,653	(NA)	(NA)	(NA)
Contract work only.....	...do.....	48,877	44,983	36,726	3,984
Cost of purchased machinery installed.....	...do.....	32,326	39,836	65,752	(NA)
Value of shipments and receipts.....	...do.....	2,939,534	1,625,098	(NA)	(NA)
Value of net shipments of natural gas liquids ⁵.....	...do.....	815,244	699,328	576,828	96,185
Capital expenditures.....	...do.....	115,801	94,930	109,959	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	4,005	(NA)	2,902	772

(NA) Not available.

¹Represents number of plants.

²Excludes the cost of crude petroleum, including condensate, received for processing, if any.

³Excludes cost of natural gas and crude petroleum, including condensate, received for processing.

⁴Excludes cost of natural gas, natural gas liquids, and crude petroleum, including condensate, received for processing.

⁵Represents value of shipments of natural gas liquids less value of natural gas liquids and crude petroleum, including condensate, received for processing.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



Average employment in this industry showed a decrease of 17 percent from 1958 to a total of 13.7 thousand employees in 1963. Value added in mining amounted to \$784 million in 1963, an increase of 33 percent from 1958.

The Natural Gas Liquids Industry represents establishments engaged primarily in producing liquid hydrocarbons from oil and gas field gases. Establishments recovering liquefied petroleum gases incident to petroleum refining or to manufacturing of chemicals are classified in Major Groups 28 and 29.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based upon the definitions embodied in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production and related workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production and related workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production and related workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value

added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Natural Gas Liquids Industry consists not only of products described above as primary to the industry, but also includes the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Natural Gas Liquids Industry amounted to \$2,940 million in 1963. Of this total, \$2,930 million were for natural gas liquids and residue gas which are products primary to the industry, and only \$10 million were for products primary to other industries, receipts for contract services, and products purchased and resold without further processing.

This report includes all natural gas liquids produced at plants primarily operated to produce such products. It does not include the production of such products at pipeline booster plants or as drips in oil and gas field operations or the production of liquefied refinery gas at petroleum refineries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments of natural gas liquids in 1958 was \$1,061 million and the value of net shipments of such products was \$815 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were

available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of

such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE NATURAL GAS LIQUIDS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963												1958		
	Establishments, number		All employees		Production and related workers			Value added in mining	Cost of minerals received for preparation, supplies, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Value of net shipments of natural gas liquids ¹	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages								
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total.....	650	244	13,741	96,362	12,103	24,726	81,861	783,966	2,239,043	32,326	2,939,534	815,244	115,801	16,514	587,580
Northeast and North Central....	41	10	609	4,058	530	1,138	3,446	34,558	227,593	676	241,431	51,632	21,396	660	31,060
Nebraska.....	5	-	63	443	57	129	395	1,469	3,272	(D)	4,340	2,051	(D)	(NA)	(NA)
Kansas.....	19	6	303	1,895	272	589	1,645	15,811	119,915	177	119,493	23,430	16,410	328	11,788
South Atlantic....	26	6	305	1,943	278	561	1,631	12,344	106,999	197	118,450	18,715	1,090	343	8,501
East South Central	11	5	230	1,605	193	388	1,261	14,050	64,346	205	77,306	12,285	795	230	9,011
West South Central	457	182	10,098	70,242	8,846	18,092	59,074	611,936	1,527,293	27,443	2,084,334	600,927	82,338	12,275	440,047
Arkansas.....	6	2	139	876	117	227	692	2,336	14,425	58	16,701	3,919	118	205	4,114
Louisiana.....	71	25	1,391	10,126	1,205	2,504	8,045	133,019	509,815	4,828	632,614	118,398	15,048	1,208	56,550
Oklahoma.....	74	23	453	9,933	1,216	2,437	7,907	68,839	113,982	3,610	175,731	60,079	10,700	2,283	49,926
Texas.....	306	132	7,115	49,307	6,308	12,924	42,431	407,742	889,071	18,947	1,259,288	418,531	56,472	8,579	329,457
Mountain.....	60	23	1,176	8,177	1,059	2,173	7,277	47,179	157,332	2,709	199,932	60,975	7,288	1,205	39,408
Wyoming.....	17	3	240	1,709	230	448	1,646	8,620	24,970	152	32,141	11,686	1,601	250	3,990
Colorado.....	7	2	123	979	115	241	831	4,827	13,022	121	17,264	7,300	706	(NA)	(NA)
New Mexico.....	31	18	767	5,170	675	1,401	4,513	31,328	110,249	1,524	138,726	37,413	4,375	771	28,851
Pacific (California).....	55	18	1,323	10,337	1,197	2,374	9,171	63,899	155,480	1,096	217,581	70,710	2,894	1,801	59,553

- Represents zero.

(D) Withheld to avoid disclosing figures for individual companies.

(NA) Not available.

¹Represents value of shipments of natural gas liquids and crude petroleum, including condensate, received for processing.

Table 3A.—PRIMARY PRODUCTS OF THE NATURAL GAS LIQUIDS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	Unit of measure	1963			1958		
		Production for all purposes (quantity)	Total shipments (including interplant transfers) or receipts		Production for all purposes (quantity)	Total shipments (including interplant transfers) or receipts	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
United States, total:							
Natural gas liquids (gross) ¹	1,000 barrels...	520,983	519,826	1,061,472	358,894	359,589	841,358
Natural gas liquids received from other natural gas liquids plants for further processing.....	...do.....	117,802	117,802	223,575	64,702	64,702	142,030
Crude petroleum, including condensate, received for processing.....	...do.....	8,710	8,710	22,653	(NA)	(NA)	(NA)
Net natural gas liquids ².....	...do.....	394,471	393,314	815,244	294,192	294,887	699,328
Residue gas:							
Shipped ³	Million cu. ft..	(X)	11,430,510	1,871,324	(X)	7,664,890	4776,153
Used for fuel at plant.....	...do.....	480,872	(X)	(X)	426,920	(X)	(X)
Northeast and North Central:							
Net natural gas liquids ²	1,000 barrels...	26,978	25,715	51,632	16,337	16,151	38,773
Residue gas:							
Shipped ³	Million cu. ft..	(X)	931,654	189,136	(X)	585,254	4125,450
Used for fuel at plant.....	...do.....	19,773	(X)	(X)	15,228	(X)	(X)
Kansas:							
Net natural gas liquids ²	1,000 barrels...	13,373	12,922	23,430	5,359	5,177	10,957
Residue gas:							
Shipped ³	Million cu. ft..	(X)	659,322	95,767	(X)	382,122	457,661
Used for fuel at plant.....	...do.....	11,137	(X)	(X)	6,144	(X)	(X)
South Atlantic:							
Net natural gas liquids ²	1,000 barrels...	9,824	9,675	18,715	6,638	6,620	10,702
Residue gas shipped ³	Million cu. ft..	(X)	300,470	99,714	(X)	151,670	421,081
East South Central:							
Net natural gas liquids ²	1,000 barrels...	6,072	5,931	12,285	7,265	7,312	12,158
Residue gas shipped ³	Million cu. ft..	(X)	417,636	61,180	(X)	584,956	424,649
Kentucky:							
Net natural gas liquids ²	1,000 barrels...	4,832	4,692	9,654	6,518	6,572	10,291
Mississippi:							
Natural gas liquids ¹ ⁵.....	...do.....	1,240	1,239	2,631	747	740	1,867
West South Central:							
Natural gas liquids (gross) ¹.....	...do.....	401,951	402,387	821,461	271,585	272,740	637,578
Natural gas liquids received from other natural gas liquids plants for further processing.....	...do.....	103,645	103,645	199,949	59,110	59,110	131,147
Crude petroleum, including condensate, received for processing.....	...do.....	8,005	8,005	20,585	(NA)	(NA)	(NA)
Net natural gas liquids ².....	...do.....	290,301	290,737	600,927	212,475	213,630	506,431
Residue gas:							
Shipped ³	Million cu. ft..	(X)	8,391,039	1,297,562	(X)	5,241,323	4462,067
Used for fuel at plant.....	...do.....	364,810	(X)	(X)	319,034	(X)	(X)
Arkansas:							
Natural gas liquids ¹	1,000 barrels...	52,165	52,169	53,919	22,266	22,267	25,390
Residue gas:							
Shipped ³	Million cu. ft..	(X)	(D)	(D)	(X)	33,539	42,707
Used for fuel at plant.....	...do.....	3,372	(X)	(X)	5,391	(X)	(X)
Louisiana:							
Natural gas liquids (gross) ¹	1,000 barrels...	60,866	60,549	139,350	28,406	28,645	81,088
Natural gas liquids and crude petroleum received for processing.....	...do.....	9,788	9,788	20,952	63,898	63,898	610,508
Net natural gas liquids ².....	...do.....	51,078	50,761	118,398	24,508	24,747	70,580
Residue gas:							
Shipped ³	Million cu. ft..	(X)	2,590,835	492,791	(X)	876,149	491,253
Used for fuel at plant.....	...do.....	42,976	(X)	(X)	30,266	(X)	(X)
Oklahoma:							
Natural gas liquids (gross) ¹	1,000 barrels...	37,394	37,355	68,794	(NA)	(NA)	(NA)
Natural gas liquids and crude petroleum received for processing.....	...do.....	5,087	5,087	8,715	(NA)	(NA)	(NA)
Net natural gas liquids ².....	...do.....	32,307	32,268	60,079	28,168	28,162	54,964
Residue gas:							
Shipped ³	Million cu. ft..	(X)	(D)	(D)	(X)	589,221	443,402
Used for fuel at plant.....	...do.....	46,736	(X)	(X)	47,849	(X)	(X)
Texas:							
Natural gas liquids (gross) ¹	1,000 barrels...	301,526	302,314	609,398	209,100	210,021	439,405
Natural gas liquids received from other natural gas liquids plants for further processing.....	...do.....	92,865	92,865	181,893	51,567	51,567	113,908
Crude petroleum, including condensate, received for processing.....	...do.....	3,910	3,910	8,974	(NA)	(NA)	(NA)
Net natural gas liquids ².....	...do.....	204,751	205,539	418,531	157,533	158,454	375,497
Residue gas:							
Shipped ³	Million cu. ft..	(X)	4,938,457	646,174	(X)	3,742,414	4324,705
Used for fuel at plant.....	...do.....	271,726	(X)	(X)	235,528	(X)	(X)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 3A.—PRIMARY PRODUCTS OF THE NATURAL GAS LIQUIDS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Unit of measure	1963			1958		
		Production for all purposes (quantity)	Total shipments (including interplant transfers) or receipts		Production for all purposes (quantity)	Total shipments (including interplant transfers) or receipts	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
Mountain:							
Net natural gas liquids ²	1,000 barrels..	34,994	35,066	60,975	22,880	22,633	45,386
Residue gas:							
Shipped ³	Million cu. ft.	(X)	925,723	119,591	(X)	639,166	⁴ 63,404
Used for fuel at plant.....	...do.....	52,926	(X)	(X)	38,665	(X)	(X)
Wyoming:							
Natural gas liquids ^{1 2}	1,000 barrels..	5,604	5,626	(D)	2,547	2,522	5,779
Residue gas:							
Shipped ³	Million cu. ft.	(X)	141,192	19,981	(X)	46,310	⁴ 4,106
Used for fuel at plants.....	...do.....	5,668	(X)	(X)	5,100	(X)	(X)
Colorado:							
Net natural gas liquids ²	1,000 barrels..	3,530	3,475	(D)	(NA)	(NA)	(NA)
Residue gas:							
Shipped ³	Million cu. ft.	(X)	73,105	9,964	(X)	(NA)	(NA)
Used for fuel at plant.....	...do.....	4,393	(X)	(X)	(NA)	(X)	(X)
New Mexico:							
Net natural gas liquids ²	1,000 barrels..	23,019	23,148	(D)	17,107	16,903	32,421
Residue gas:							
Shipped ³	Million cu. ft.	(X)	663,669	82,421	(X)	538,513	⁴ 55,059
Used for fuel at plant.....	...do.....	35,498	(X)	(X)	28,548	(X)	(X)
Pacific (California):							
Net natural gas liquids ²	1,000 barrels..	26,302	26,190	70,710	28,597	28,541	85,878
Residue gas:							
Shipped ³	Million cu. ft.	(X)	463,988	144,141	(X)	462,521	⁴ 79,502
Used for fuel at plant.....	...do.....	35,688	(X)	(X)	44,316	(X)	(X)

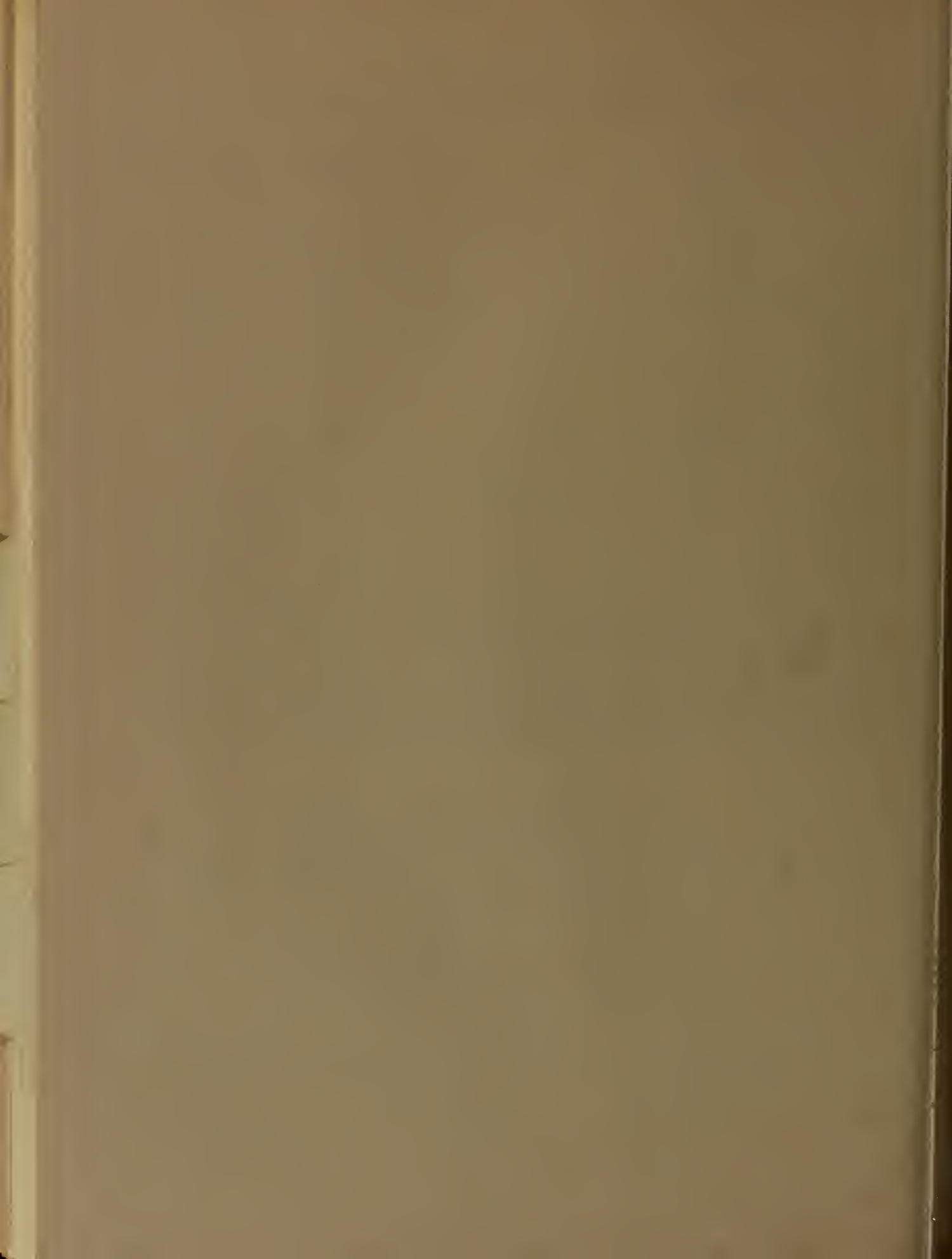
(D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Represents natural gasoline, plant condensate, and liquefied petroleum gases, including drip from lines, isopentane, and ethane. Also includes finished gasoline, kerosene, and distillate and residual oils produced at natural gasoline plants.²Represents gross natural gas liquids less natural gas liquids received from other natural gas liquids plants for further processing and less crude petroleum received for processing.³Represents all residue gas used by the reporting company at other company operations, gas returned to supplying producer, and gas delivered to other companies.⁴Not entirely comparable with the 1963 value reported for residue gas. For 1958, some respondents reported their residue gas as having no value, or only a nominal value. For 1963, all respondents were requested to attach a realistic value at the plant to their residue gas if it was not used at the plant for power or heat. For the United States total in 1958, if gas valued at less than 3.3 cents per MCF had been assigned the average value of gas reported valued at 3.3 cents or more, the total value of residue gas shipped would have been \$926,302 thousand.⁵No natural gas liquids were received for further processing in this State. Hence, these figures are equivalent to net natural gas liquids, see footnote 2.⁶Excludes crude petroleum received for processing, if any.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR NATURAL GAS LIQUIDS SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

Product code	Product and year	Indexes (1954 = 100)	
		Production	Unit value
1321	Natural gas liquids.....1963...	163	126
	.....1958...	115	106
	Net natural gas liquids.....1963...	154	91
	.....1958...	115	104
	Residue gas.....1963...	169	¹ 146
	.....1958...	115	108

¹The unit value relative for the period 1958-1963 was obtained by using for the value of residue gas shipped in 1958 the value estimate, on a basis comparable to 1963, indicated in table 3A, footnote 4.



PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-13D-1

INDUSTRY SERIES

preliminary
report

Drilling oil and gas wells services

SIC Code 1381

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, receipts for services and shipments of the Drilling Oil and Gas Wells Services Industry were valued at \$968 million, an increase of 7 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of

8 percent from 1958 to a total of 54.8 thousand employees in 1963. Value added in mining amounted to \$645 million in 1963, an increase of 10 percent from 1958.

The Drilling Oil and Gas Wells Services Industry represents establishments engaged primarily in drilling wells for oil or gas for others on a contract, fee, or other basis. This industry includes contractors that specialize in "spudding, in," "drilling in," redrilling, and directional drilling.

This report includes figures for administrative offices, storage facilities, and other auxiliary

Table 1.—GENERAL STATISTICS FOR THE DRILLING OIL AND GAS WELLS SERVICES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954 ²	1934 ³
Establishments:					
Total.....	Number.....	2,831	3,064	2,869	³ 985
With 20 employees or more.....	...do.....	742	820	878	(NA)
All employees:					
Number.....	Number.....	54,834	59,411	67,976	24,224
Payroll.....	Thousand dollars...	313,671	289,243	304,312	41,937
Production, development, and exploration workers:					
Number.....	Number.....	50,272	52,274	62,145	22,548
Man-hours.....	Thousand.....	103,772	109,470	133,216	38,621
Wages.....	Thousand dollars...	276,945	239,328	264,797	36,020
Value added in mining.....	...do.....	645,045	587,440	623,967	(NA)
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	...do.....	354,316	335,060	381,861	(NA)
Subcontract work only.....	...do.....	80,391	51,366	46,048	(NA)
Cost of purchased machinery installed.....	...do.....	113,215	84,457	120,385	(NA)
Receipts for services and shipments.....	...do.....	968,375	904,939	972,745	128,107
Capital expenditures.....	...do.....	144,201	102,018	153,468	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	5,663	(NA)	4,265	678

(NA) Not available.

¹Excludes data for 2 establishments with from 20 to 49 employees classified in Alaska.

²Excludes data for 1 establishment with 20 to 49 employees classified in Alaska.

³Represents number of operating companies.

April 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Establishments classified in the oil and gas field services industries, in general, filed one report for all contract services performed in the United States. These reports were classified on the basis of the principal kind of work performed and the principal State in which the service was performed. The Drilling Oil and Gas Wells Services Industry includes establishments producing crude petroleum and natural gas whose receipts for contract work were greater than the value of shipments of oil and gas. In such cases, separate reports were required for each State in which the company operated wells. Companies were permitted, however, to prepare separate reports for their oil and gas production and their contract service activities, and a few companies prepared such separate reports, thus permitting the companies to combine their contract services operations for all States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll period ended nearest the 15th of March, May, August, and November plus the number of all other employees about March 15. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, sub-contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a

measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

RECEIPTS FOR SERVICES

The receipts for services and other receipts reported by establishments classified in the Drilling Oil and Gas Wells Services Industry consisted not only of services described above as primary to the industry, but also included receipts for secondary services (which are primary in other industries), receipts for oil and gas produced, and receipts for products purchased and resold without further processing at the establishment. The total receipts of establishments classified in the Drilling Oil and Gas Wells Services Industry amounted to \$968 million. Of this total, \$897 million were for services primary to the industry.

The total receipts of establishments classified in the industry should be clearly distinguished from the total value of primary services of the industry by all contractors. The latter figures, appearing in table 3A, indicate that receipts for primary services of this industry in 1963 were \$937 million. Of this total, \$897 million, or 96 percent, represented services by establishments classified in the industry, while the remainder represented services which were secondary activities of establishments classified in other industries.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the performance of secondary services and the production of secondary products. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the receipts by all companies for services primary to this industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and

for each State is being issued. Final industry reports and final area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th Census of mining establishments in the United

States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE DRILLING OIL AND GAS WELLS SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all oil and gas field services performed in the United States. These reports were classified on the basis of the principal kind of work and the principal State in which the service was performed.)

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and subcontract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	2,831	742	54,834	313,671	50,272	103,772	276,945	645,045	354,316	113,215	968,375	144,201	159,411	1,587,440
Middle Atlantic...	106	6	672	3,420	645	1,459	3,266	6,803	3,807	493	10,257	846	1,062	11,168
New York.....	18	-	94	540	81	180	468	933	415	26	1,279	95	71	483
Pennsylvania.....	88	6	578	2,880	564	1,279	2,798	5,870	3,392	467	8,978	751	991	10,685
East North Central	327	33	3,043	14,252	2,869	5,375	13,365	31,607	13,019	2,402	43,226	3,802	3,719	27,270
Ohio.....	110	8	824	4,267	765	1,618	3,967	9,760	4,014	910	13,613	1,071	808	5,287
Indiana.....	48	5	373	1,365	344	570	1,229	2,560	1,329	236	3,758	367	384	2,959
Illinois and Michigan.....	169	20	1,846	8,620	1,760	3,187	8,169	19,287	7,676	1,256	25,855	2,364	2,527	19,024
West North Central	240	38	2,721	13,539	2,415	4,632	11,402	33,923	15,516	2,861	46,482	5,818	3,356	31,384
North Dakota.....	10	4	207	1,136	186	458	1,052	3,465	1,203	92	3,837	923	528	6,585
Nebraska.....	19	3	227	1,236	196	362	998	3,613	1,974	251	5,333	505	239	2,437
Kansas.....	204	31	2,256	10,963	2,008	3,766	9,177	26,394	12,177	2,486	36,732	4,325	2,570	22,063
South Atlantic....	129	13	1,092	5,171	994	2,150	4,593	10,805	5,655	1,058	15,977	1,541	929	5,300
West Virginia...	125	13	1,059	5,027	965	2,093	4,471	10,516	5,359	1,058	15,423	1,510	901	5,041
East South Central	236	39	2,709	13,277	2,501	4,893	11,944	28,698	23,464	2,832	49,308	5,686	2,288	17,985
Kentucky.....	180	11	836	3,023	766	1,418	2,687	5,649	2,940	305	8,034	860	1,355	7,194
Alabama.....	8	3	244	1,441	232	575	1,342	3,494	5,414	515	8,770	653	58	347
Mississippi.....	42	24	1,618	8,791	1,492	2,878	7,893	19,483	15,079	2,012	32,411	4,163	865	10,398
West South Central	1,448	498	36,399	209,268	33,376	69,521	183,450	430,271	239,850	89,117	649,368	109,870	39,438	401,270
Arkansas.....	25	11	532	2,406	501	836	2,250	4,622	2,762	1,578	7,917	1,045	419	3,700
Louisiana.....	229	123	11,663	76,061	10,676	24,618	65,837	170,118	88,855	55,350	249,083	65,240	11,006	151,547
Oklahoma.....	304	87	5,656	28,732	5,098	9,893	24,840	53,088	33,682	9,142	84,294	11,618	6,595	55,596
Texas.....	890	277	18,548	102,069	17,101	34,174	90,523	202,443	114,551	23,047	308,074	31,967	21,418	190,427
Mountain.....	252	70	5,173	32,477	4,760	10,419	29,179	64,699	37,413	6,829	99,050	9,891	5,946	65,355
Montana.....	30	9	717	4,768	666	1,618	4,159	9,575	5,711	1,236	14,595	1,927	361	24,090
Wyoming.....	77	19	1,280	8,676	1,171	2,704	7,749	16,013	9,637	2,003	24,758	2,895	1,605	17,422
Colorado.....	47	6	479	2,845	416	936	2,408	7,021	2,749	539	9,464	845	1,009	9,740
New Mexico.....	84	30	2,238	13,467	2,094	4,190	12,528	26,401	15,571	2,751	40,936	3,787	2,114	23,865
Utah and Nevada.	14	6	459	2,721	413	971	2,335	5,689	3,745	300	9,297	437	857	10,238
Pacific.....	93	45	3,025	22,267	2,712	5,323	19,746	38,239	15,592	7,623	54,707	6,747	12,673	127,708
California.....	86	40	2,852	20,723	2,556	4,974	18,306	35,047	14,506	6,517	49,938	6,132	(NA)	(NA)
Washington and Alaska.....	7	5	173	1,544	156	349	1,440	3,192	1,086	1,106	4,769	615	(NA)	(NA)

- Represents zero. (NA) Not available.

¹Excludes data for 2 establishments with from 20 to 49 employees classified in Alaska.

²Includes data for 2 establishments with less than 5 employees in Idaho.

Table 3A.—PRIMARY SERVICES OF THE DRILLING OIL AND GAS WELLS SERVICES INDUSTRY PERFORMED BY ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958
(In general, contractors prepared one report for all oil and gas field services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. Separate data were contained in these reports for the various kinds of work performed.)

Type of service and geographic area	Receipts for services (\$1,000)		Type of service and geographic area	Receipts for services (\$1,000)	
	1963	1958 ¹		1963	1958 ¹
UNITED STATES			EAST SOUTH CENTRAL		
Drilling oil and gas wells, total.....	936,877	895,267	Drilling oil and gas wells, total.....	43,791	30,810
Drilling oil, gas, dry, and service wells.....	812,083	822,252	Drilling oil, gas, dry, and service wells.....	37,419	29,824
Drilling in, spudding in, and tailing in.....	27,599	73,015	Drilling in, spudding in, and tailing in.....	648	986
Reworking wells.....	97,195		Reworking wells.....	5,724	
MIDDLE ATLANTIC			Mississippi		
Drilling oil and gas wells, total.....	10,026	13,271	Drilling oil and gas wells.....	30,370	18,841
Drilling oil, gas, dry, and service wells.....	9,200	12,487	Drilling oil, gas, dry, and service wells.....	25,337	18,789
Drilling in, spudding in, and tailing in.....	291	784	WEST SOUTH CENTRAL		
Reworking wells.....	535		Drilling oil and gas wells, total.....	628,888	609,118
New York			Drilling oil, gas, dry, and service wells.....	546,982	562,076
Drilling oil and gas wells.....	1,557	720	Drilling in, spudding in, and tailing in.....	12,068	47,042
Drilling oil, gas, dry, and service wells.....	1,278	(NA)	Reworking wells.....	69,838	
Pennsylvania			Arkansas		
Drilling oil and gas wells.....	8,469	12,551	Drilling oil and gas wells.....	8,767	5,920
Drilling oil, gas, dry, and service wells.....	7,922	(NA)	Drilling oil, gas, dry, and service wells.....	7,322	5,515
EAST NORTH CENTRAL			Louisiana		
Drilling oil and gas wells, total.....	41,332	39,356	Drilling oil and gas wells, total.....	242,331	214,205
Drilling oil, gas, dry, and service wells.....	34,334	33,897	Drilling oil, gas, dry, and service wells.....	219,947	203,693
Drilling in, spudding in, and tailing in.....	4,080	5,459	Drilling in, spudding in, and tailing in.....	1,589	10,512
Reworking wells.....	2,918		Reworking wells.....	20,795	
Ohio			Oklahoma		
Drilling oil and gas wells.....	11,483	7,346	Drilling oil and gas wells.....	78,868	80,446
Drilling oil, gas, dry, and service wells.....	10,720	7,042	Drilling oil, gas, dry, and service wells.....	65,952	73,063
Indiana			Texas		
Drilling oil and gas wells.....	4,251	4,134	Drilling oil and gas wells, total.....	298,922	308,547
Drilling oil, gas, dry, and service wells.....	3,056	3,737	Drilling oil, gas, dry, and service wells.....	253,761	279,805
Illinois and Michigan			Drilling in, spudding in, and tailing in.....	7,193	28,742
Drilling oil and gas wells, total.....	25,598	27,876	Reworking wells.....	37,968	
Drilling oil, gas, dry, and service wells.....	20,558	23,118	MOUNTAIN		
Drilling in, spudding in, and tailing in.....	3,183	4,402	Drilling oil and gas wells, total.....	97,869	102,409
Reworking wells.....	1,857		Drilling oil, gas, dry, and service wells.....	85,392	92,851
WEST NORTH CENTRAL			Drilling in, spudding in, and tailing in.....	2,827	9,558
Drilling oil and gas wells, total.....	45,108	48,527	Reworking wells.....	9,650	
Drilling oil, gas, dry, and service wells.....	39,145	42,797	Montana		
Drilling in, spudding in, and tailing in.....	3,398	5,730	Drilling oil and gas wells, total.....	14,234	25,755
Reworking wells.....	2,565		Drilling oil, gas, dry, and service wells.....	11,951	25,541
Nebraska			Drilling in, spudding in, and tailing in.....	793	2214
Drilling oil and gas wells.....	4,718	4,550	Reworking wells.....	1,490	
Drilling oil, gas, dry, and service wells.....	4,312	4,094	Wyoming		
Kansas			Drilling oil and gas wells, total.....	26,014	25,780
Drilling oil and gas wells, total.....	36,030	33,974	Drilling oil, gas, dry, and service wells.....	22,591	24,114
Drilling oil, gas, dry, and service wells.....	31,058	28,797	Drilling in, spudding in, and tailing in.....	1,443	1,666
Drilling in, spudding in, and tailing in.....	3,010	5,177	Reworking wells.....	1,980	
Reworking wells.....	1,962		Colorado		
SOUTH ATLANTIC			Drilling oil and gas wells.....	8,678	15,673
Drilling oil and gas wells, total.....	14,501	7,036	Drilling oil, gas, dry, and service wells.....	6,883	13,760
Drilling oil, gas, dry, and service wells.....	13,418	6,830	Reworking wells.....	1,435	(NA)
Drilling in, spudding in, and tailing in.....	575	206	New Mexico		
Reworking wells.....	508		Drilling oil and gas wells.....	39,889	37,872
West Virginia			Drilling oil, gas, dry, and service wells.....	35,017	32,107
Drilling oil and gas wells.....	13,947	6,672	Reworking wells.....	4,745	(NA)
Drilling oil, gas, dry, and service wells.....	13,013	6,466	Utah		
Drilling in, spudding in, and tailing in.....	575	(NA)	Drilling oil and gas wells.....	8,740	(NA)
PACIFIC			California		
Drilling oil and gas wells, total.....	55,362	144,740	Drilling oil and gas wells, total.....	49,068	(NA)
Drilling oil, gas, dry, and service wells.....	46,193	141,490	Drilling oil, gas, dry, and service wells.....	39,899	(NA)
Drilling in, spudding in, and tailing in.....	3,712	23,250	Drilling in, spudding in, and tailing in.....	3,712	(NA)
Reworking wells.....	5,457		Reworking wells.....	5,457	(NA)

(NA) Not available.

¹Excludes data for 2 establishments classified in Alaska.

²Includes figures for Idaho.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 2B.--NUMBER AND FOOTAGE OF OIL, GAS, DRY, AND SERVICE WELLS DRILLED AND COSTS BORNE BY DRILLING CONTRACTORS IN DRILLING AND EQUIPPING WELLS DRILLED ON CONTRACT IN THE UNITED STATES: 1963, 1958, 1954, AND 1939; AND FOR GEOGRAPHIC AREAS: 1963

(Represents wells drilled on contract for others by establishments classified in the oil and gas field services industries and in the crude petroleum and natural gas industry. All wells reported by an establishment were classified in the principal State in which the establishment performed services.)

Item	United States, total				Middle Atlantic			East North Central				
	1963	1958	1954	1939	Total	New York	Pennsylvania	Total	Ohio	Indiana	Illinois	Michigan
Number of wells drilled, total ⁶	35,347	37,977	45,264	12,729	660	178	482	3,515	912	429	1,506	668
Oil wells.....	18,537	21,327	27,447	10,344	336	124	212	1,385	378	190	659	158
Gas wells.....	3,557	3,429	3,103	758	231	27	204	360	210	72	8	70
Dry holes ⁷	11,866	12,140	13,270	1,627	88	24	64	1,491	277	153	777	284
Service wells ⁸	1,387	1,081	1,444	(NA)	5	3	2	279	47	14	62	156
Footage drilled, total...1,000 ft..	154,575	153,332	171,391	40,083	1,568	321	1,247	8,182	2,832	706	3,037	1,607
Oil wells.....do...	79,333	82,366	103,363	32,786	547	179	368	3,267	1,127	365	1,343	432
Gas wells.....do...	17,175	16,991	12,475	2,155	83	88	725	995	740	91	16	148
Dry holes.....do...	56,051	52,339	53,483	5,142	202	54	154	3,472	893	226	1,580	773
Service wells.....do...	2,016	1,636	2,070	(NA)	6			448	72	24	98	254
Average footage drilled per well,												
all wells.....	4,373	4,037	3,786	3,149	2,376	1,803	2,587	2,328	3,105	1,646	2,017	2,406
Oil wells.....	4,279	3,862	3,766	3,170	1,628	1,444	1,736	2,359	2,981	1,921	2,038	2,734
Gas wells.....	4,828	4,955	4,020	2,843	3,519	3,259	3,554	2,764	3,524	1,264	2,000	2,114
Dry holes.....	4,724	4,311	4,030	3,160	2,295	2,000	2,333	2,329	3,224	1,477	2,033	2,722
Service wells.....	1,453	1,513	1,434	(NA)	1,200			1,606	1,532	1,714	1,581	1,628
Cost borne by contractors in												
drilling and equipping wells on												
contract, total ⁹.....\$1,000..	660,560	655,207	715,820	98,752	7,213	1,025	6,188	24,917	8,130	2,466	9,007	5,314
Per well.....do...	18.7	17.3	15.8	7.8	10.9	5.8	12.8	7.1	8.9	5.7	6.0	8.0
Per foot.....\$1.00..	4.27	4.27	4.18	2.46	4.60	3.19	4.96	3.05	2.87	3.49	2.97	3.31
Oil wells.....\$1,000..	339,561	348,810	437,499	81,261	1,085	349	736	10,328	3,708	1,101	4,221	1,298
Per well.....do...	18.3	16.4	15.9	7.9	3.2	2.8	3.5	7.5	9.8	5.8	6.4	8.2
Per foot.....\$1.00..	4.28	4.23	4.23	2.48	1.98	1.95	2.00	3.16	3.29	3.02	3.14	3.00
Gas wells.....\$1,000..	81,595	85,944	55,887	4,520	5,095	413	4,682	3,179	1,869	373	61	876
Per well.....do...	22.9	25.1	18.0	6.0	22.1	15.3	23.0	8.8	8.9	5.2	7.6	12.5
Per foot.....\$1.00..	4.75	5.06	4.48	2.10	6.27	4.69	6.46	3.19	2.53	4.10	3.81	5.92
Dry holes.....\$1,000..	232,648	215,214	216,337	12,971	1,026	13,263	13,770	10,180	2,408	910	4,437	2,425
Per well.....do...	19.6	17.7	16.3	8.0	11.7	13,977	13,117	6.8	8.7	5.9	5.7	8.5
Per foot.....\$1.00..	4.15	4.11	4.04	2.52	5.08	13,487	13,500	2.93	2.70	4.03	2.81	3.14
Service wells.....\$1,000..	6,756	5,239	6,097	(NA)	7	(13)	(13)	1,230	145	82	288	715
Per well.....do...	4.9	4.8	4.2	(NA)	1.4	(13)	(13)	4.4	3.1	5.9	4.6	4.6
Per foot.....\$1.00..	3.35	3.20	2.95	(NA)	1.17	(13)	(13)	2.75	2.01	3.42	2.94	2.81
Cost, excluding payments to sub-												
contractors and excluding cost												
of casing, tubing, and well												
equipment, total.....\$1,000..	589,141	627,369	689,037	95,604	6,574	924	5,650	22,998	7,667	2,090	8,706	4,535
Per well.....do...	16.7	16.5	15.2	7.5	10.0	5.2	11.7	6.5	8.4	4.9	5.8	6.8
Per foot.....\$1.00..	3.81	4.09	4.02	2.39	4.19	2.88	4.53	2.81	2.71	2.96	2.87	2.82
Oil wells.....\$1,000..	301,070	333,392	420,353	78,512	1,018	289	729	9,612	3,454	903	4,138	1,117
Per well.....do...	16.2	15.6	15.3	7.6	3.0	2.3	3.4	6.9	9.1	4.8	6.3	7.1
Per foot.....\$1.00..	3.80	4.05	4.07	2.39	1.86	1.61	1.98	2.94	3.06	2.47	3.08	2.59
Gas wells.....\$1,000..	72,268	82,663	53,066	4,290	4,554	390	4,164	2,965	1,797	356	59	753
Per well.....do...	20.3	24.1	17.1	5.7	19.7	14.4	20.4	8.2	8.6	4.9	7.4	10.8
Per foot.....\$1.00..	4.21	4.87	4.25	1.99	5.60	4.43	5.74	2.98	2.43	3.91	3.69	5.09
Dry holes.....\$1,000..	209,915	206,242	209,690	12,802	995	13,245	13,757	9,474	2,271	784	4,228	2,191
Per well.....do...	17.7	17.0	15.8	7.9	11.3	13,911	13,115	6.4	8.2	5.1	5.4	7.7
Per foot.....\$1.00..	3.75	3.94	3.92	2.49	4.93	13,454	13,492	2.73	2.54	3.47	2.68	2.83
Service wells.....\$1,000..	5,888	5,072	5,928	(NA)	7	(13)	(13)	947	145	47	281	474
Per well.....do...	4.2	4.7	4.1	(NA)	1.4	(13)	(13)	3.4	3.1	3.4	4.5	3.0
Per foot.....\$1.00..	2.92	3.10	2.86	(NA)	1.17	(13)	(13)	2.11	2.01	1.96	2.87	1.87
Amount paid or due subcontractors												
for drilling or equipping wells,												
total.....\$1,000..	53,153	23,480	19,469	(NA)	243	28	215	559	210	124	108	117
Oil wells.....do...	27,369	12,869	11,448	(NA)	1	-	1	182	79	68	35	-
Gas wells.....do...	5,908	2,203	1,846	(NA)	221	-	214	20	17	3	-	-
Dry holes.....do...	19,595	8,270	6,035	(NA)	21	-	-	238	114	-	73	-
Service wells.....do...	281	138	140	(NA)	-	-	-	119	-	53	-	117
Payments to drilling subcon-												
tractors including day work												
and turnkey, total.....do...	17,246	(NA)	(NA)	(NA)	-	-	-	436	170	78	75	113
Oil wells.....do...	9,263	(NA)	(NA)	(NA)	-	-	-	136	69	49	18	-
Gas wells.....do...	2,250	(NA)	(NA)	(NA)	-	-	-	7	7	-	-	-
Dry holes.....do...	5,588	(NA)	(NA)	(NA)	-	-	-	180	94	29	57	-
Service wells.....do...	145	(NA)	(NA)	(NA)	-	-	-	113	-	-	-	113
Payments to other subcon-												
tractors, total.....do...	35,907	(NA)	(NA)	(NA)	243	28	215	123	40	46	33	4
Oil wells.....do...	18,106	(NA)	(NA)	(NA)	1	-	1	46	10	19	17	-
Gas wells.....do...	3,658	(NA)	(NA)	(NA)	221	-	-	13	10	3	-	-
Dry holes.....do...	14,007	(NA)	(NA)	(NA)	21	-	214	58	20	-	16	-
Service wells.....do...	136	(NA)	(NA)	(NA)	-	-	-	6	-	-	-	4
Cost of casing, tubing, and well												
equipment, total ¹⁵.....do...	18,266	4,358	7,314	3,148	396	73	323	1,360	253	252	193	662
Oil wells.....do...	11,122	2,549	5,698	2,749	66	60	6	534	175	130	48	181
Gas wells.....do...	3,419	1,078	975	230	320	-	-	194	55	14	2	123
Dry holes.....do...	3,130	702	612	169	10	13	317	468	23	-	136	-
Service wells.....do...	587	29	29	(NA)	-	-	-	164	-	108	7	358

See footnotes on page 8.

Table 3B.—NUMBER AND FOOTAGE OF OIL, GAS, DRY, AND SERVICE WELLS DRILLED AND COSTS BORNE BY DRILLING CONTRACTORS IN DRILLING AND EQUIPPING WELLS DRILLED ON CONTRACT IN THE UNITED STATES: 1963, 1958, 1954, AND 1939; AND FOR GEOGRAPHIC AREAS: 1963—Continued

Item	West North Central						East South Central			
	Total	North Dakota	Nebraska	Kansas	Missouri and South Dakota ¹	South Atlantic ²	Total	Kentucky	Mississippi	Tennessee and Alabama ³
Number of wells drilled, total ⁶ ...	3,640	115	303	3,133	89	990	2,167	1,351	715	101
Oil wells.....	1,771	55	54	1,662	-	209	950	637	233	80
Gas wells.....	199	-	1	198	-	642	124	111	13	-
Dry holes.....	1,467	56	247	1,149	15	95	1,004	515	468	21
Service wells.....	203	4	1	124	74	44	89	88	1	-
Footage drilled, total...1,000 ft..	11,303	654	1,476	9,109	64	2,490	7,952	2,019	5,180	753
Oil wells.....	5,244	322	275	5,285	-	574	3,480	796	2,054	630
Gas wells.....	638	-	-	-	-	1,487	385	271	114	-
Dry holes.....	5,167	-	1,201	3,618	64	374	4,021	-	-	123
Service wells.....	254	332	-	206	-	55	66	952	3,012	-
Average footage drilled per well, all wells.....	3,105	5,687	4,871	2,907	719	2,515	3,670	1,494	7,245	7,455
Oil wells.....	2,961	5,855	-	-	-	2,746	3,663	1,250	8,815	7,875
Gas wells.....	3,206	-	5,000	2,841	-	2,316	3,105	2,441	8,769	-
Dry holes.....	3,522	-	-	3,149	-	3,937	4,005	-	-	5,857
Service wells.....	1,251	5,533	4,843	1,661	719	1,250	742	1,579	6,422	-
Cost borne by contractors in drilling and equipping wells on contract, total ⁹.....\$1,000..	32,022	2,726	3,612	25,321	363	11,939	32,221	6,221	20,549	5,451
Per well.....	8.8	23.7	11.9	8.1	4.1	12.1	14.9	4.6	28.7	54.0
Per foot.....\$1.00..	2.83	4.17	2.45	2.78	5.67	4.79	4.05	3.08	3.97	7.24
Oil wells.....\$1,000..	14,948	1,460	10,712	10,413	-	1,857	16,158	2,438	8,683	5,037
Per well.....	8.4	26.5	10,12.9	10,7.7	-	8.9	17.0	3.8	37.3	63.0
Per foot.....\$1.00..	2.85	4.53	10,2.59	10,2.73	-	3.24	4.64	3.06	4.23	8.00
Gas wells.....\$1,000..	1,637	-	(10)	(10)	-	7,966	1,333	863	470	-
Per well.....	8.2	-	(10)	(10)	-	12.4	10.8	7.8	36.2	-
Per foot.....\$1.00..	2.57	-	(10)	(10)	-	5.36	3.46	3.18	4.12	-
Dry holes.....\$1,000..	14,575	131,266	132,900	10,305	13363	1,693	14,436	132,920	131,396	414
Per well.....	8.8	1321.1	1311.7	9.0	134.1	17.8	14.4	134.8	1324.3	19.7
Per foot.....\$1.00..	2.82	133.81	132.41	2.85	135.67	4.53	3.59	133.07	133.78	3.37
Service wells.....\$1,000..	862	(13)	(13)	603	(13)	423	294	(13)	(13)	-
Per well.....	4.2	(13)	(13)	4.9	(13)	9.6	3.3	(13)	(13)	-
Per foot.....\$1.00..	3.39	(13)	(13)	2.93	(13)	7.69	4.45	(13)	(13)	-
Cost, excluding payments to subcontractors and excluding cost of casing, tubing, and well equipment, total...\$1,000..	29,028	2,654	2,974	23,037	363	10,955	25,802	5,855	17,196	2,751
Per well.....	8.0	23.1	9.8	7.4	4.1	11.1	11.9	4.3	24.1	27.2
Per foot.....\$1.00..	2.57	4.06	2.01	2.55	5.67	4.40	3.24	2.90	3.32	3.65
Oil wells.....\$1,000..	13,389	1,447	10,541	10,12,923	-	1,615	11,889	2,257	6,961	2,671
Per well.....	7.6	26.3	10,9.8	10,6.9	-	7.7	12.5	3.5	29.9	33.4
Per foot.....\$1.00..	2.55	4.49	10,1.97	10,2.45	-	2.81	3.42	2.84	3.39	4.24
Gas wells.....\$1,000..	1,522	-	(10)	(10)	-	7,302	1,062	705	357	-
Per well.....	7.6	-	(10)	(10)	-	11.4	8.6	6.4	27.5	-
Per foot.....\$1.00..	2.39	-	(10)	(10)	-	4.91	2.76	2.60	3.13	-
Dry holes.....\$1,000..	13,292	131,207	132,433	9,548	13363	1,615	12,557	132,893	132,878	80
Per well.....	9.1	1320.1	1319.8	8.3	134.1	17.0	12.5	134.8	1321.1	3.8
Per foot.....\$1.00..	2.57	133.64	132.03	2.64	135.67	4.32	3.12	133.04	133.28	0.65
Service wells.....\$1,000..	825	(13)	(13)	566	(13)	423	294	(13)	(13)	-
Per well.....	4.1	(13)	(13)	4.6	(13)	9.6	3.3	(13)	(13)	-
Per foot.....\$1.00..	3.25	(13)	(13)	2.75	(13)	7.69	4.45	(13)	(13)	-
Amount paid or due subcontractors for drilling or equipping wells, total...\$1,000..	2,358	68	416	1,874	-	95	2,997	136	1,704	1,157
Oil wells.....	1,144	13	113	1,126	-	13	1,730	98	779	853
Gas wells.....	108	-	-	-	-	42	51	11	40	-
Dry holes.....	1,069	55	303	711	-	40	1,216	27	885	304
Service wells.....	37	-	-	37	-	-	-	-	-	-
Payments to drilling subcontractors including day-work and turnkey, total...do...	848	44	-	804	-	67	1,849	76	838	935
Oil wells.....do...	397	9	-	424	-	9	1,125	50	420	655
Gas wells.....do...	36	-	-	-	-	32	40	-	40	-
Dry holes.....do...	388	35	-	353	-	26	684	26	378	280
Service wells.....do...	27	-	-	27	-	-	-	-	-	-
Payments to other subcontractors, total...do...	1,510	24	416	1,070	-	28	1,148	60	866	222
Oil wells.....do...	747	4	113	702	-	4	605	48	359	198
Gas wells.....do...	72	-	-	-	-	10	11	11	-	-
Dry holes.....do...	681	20	303	358	-	14	532	1	507	24
Service wells.....do...	10	-	-	10	-	-	-	-	-	-
Cost of casing, tubing, and well equipment, total ¹⁵.....do...	636	4	222	410	-	889	3,422	230	1,649	1,543
Oil wells.....do...	415	-	58	364	-	229	2,539	83	943	1,513
Gas wells.....do...	7	-	-	-	-	622	220	147	73	-
Dry holes.....do...	214	4	164	46	-	38	663	-	633	30
Service wells.....do...	-	-	-	-	-	-	-	-	-	-

See footnotes on page 8.

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Table 3B.—NUMBER AND FOOTAGE OF OIL, GAS, DRY, AND SERVICE WELLS DRILLED AND COSTS BORNE BY DRILLING CONTRACTORS IN DRILLING AND EQUIPPING WELLS DRILLED ON CONTRACT IN THE UNITED STATES: 1963, 1958, 1954, AND 1939; AND FOR GEOGRAPHIC AREAS: 1963—Continued

Item	West South Central					Mountain						Pacific		
	Total	Ar- kansas	Louisiana	Oklahoma	Texas	Total	Montana	Wyoming	Colorado	New Mexico	Utah and Nevada ⁴	Total	California	Washington and Alaska ⁵
Number of wells drilled, total ⁶	19,234	510	4,394	3,400	10,930	2,944	371	864	446	1,025	238	2,197	2,158	39
Oil wells.....	11,005	316	2,407	2,058	6,224	1,313	203	306	82	619	103	1,568	1,560	8
Gas wells.....	1,547	35	460	235	817	300	6	36	60	132	66	154	153	1
Dry holes ⁷	6,045	154	1,485	953	3,453	1,237	160	453	302	254	68	439	409	30
Service wells ⁷	637	5	42	154	436	94	2	69	2	20	1	36	36	-
Footage drilled, total.....1,000 ft..	99,170	1,625	31,477	12,381	53,687	15,256	1,985	4,146	2,189	5,526	1,410	8,654	8,319	335
Oil wells.....do..	53,713	993	16,265	6,600	29,855	7,344	1,184	1,567	404	3,553	636	5,164	5,080	84
Gas wells.....do..	10,282	139	3,539	1,197	5,407	1,665		237	815	631	435	910	3,134	251
Dry holes.....do..	34,220			4,166	17,974	6,120	801	2,258	1,470			2,475	105	-
Service wells.....do..	955	493	11,673	418	451	127		84	(8)	1,342	339	{2,475 105}	105	-
Average footage drilled per well, all wells.....	5,140	3,186	7,115	3,641	4,912	5,182	5,350	4,799	4,908	5,391	5,924	3,985	3,855	9,669
Oil wells.....do..	4,881	3,142	6,757	3,207	4,797	5,593	5,833	5,121	4,927	5,740	6,175	3,357	3,256	10,500
Gas wells.....do..	6,646	3,971	7,693	5,094	6,618	5,550		6,583	8,508	4,780	6,591	5,909	5,577	8,097
Dry holes.....do..	5,613			4,371	5,205	4,947	4,768	4,985	4,868			5,638		-
Service wells.....do..	1,499	3,101	7,644	2,714	1,034	1,351		1,217	(8)	4,898	4,913	{2,917 2,917}	2,917	-
Cost borne by contractors in drilling and equipping wells on contract, total ⁹.....\$1,000..	444,126	5,819	175,871	56,049	206,387	70,165	9,118	18,800	5,852	28,791	7,604	37,957	34,137	3,820
Per well.....do..	23.1	11.4	40.0	16.5	18.9	23.8	24.6	21.8	13.1	28.1	31.9	17.3	15.8	97.9
Per foot.....\$1.00..	4.48	3.58	5.59	4.53	3.84	4.60	4.59	4.53	2.67	5.21	5.39	4.39	4.10	11.40
Oil wells.....\$1,000..	239,342	3,220	93,846	30,410	111,866	35,328	5,144	7,341	1,082	18,480	3,281	20,515	19,857	658
Per well.....do..	21.7	10.2	39.0	14.8	18.0	26.9	25.3	24.0	13.2	29.9	31.9	13.1	12.7	82.2
Per foot.....\$1.00..	4.46	3.24	5.77	4.61	3.75	4.81	4.34	4.68	2.68	5.20	5.16	3.97	3.91	7.83
Gas wells.....\$1,000..	51,001	999	21,833	5,454	22,715	7,938	(11)	1,310	81,080	2,961	2,326	3,446	(12)	(12)
Per well.....do..	33.0	28.5	47.5	23.2	27.8	26.5	(11)	36.4	817.4	22.4	35.2	22.4	(12)	(12)
Per foot.....\$1.00..	4.96	7.19	6.17	4.56	4.20	4.77	(11)	5.53	83.43	4.69	5.35	3.79	(12)	(12)
Dry holes.....\$1,000..	150,717	131,600	136,019	19,387	70,325	26,475	113,974	9,860	3,690	137,350	13,997	13,546	123,830	123,162
Per well.....do..	24.9	1310.1	1339.4	20.3	20.4	21.4	1123.7	21.8	12.2	1326.8	1328.9	30.9	1224.6	12102.0
Per foot.....\$1.00..	4.40	133.25	135.16	4.65	3.91	4.33	114.96	4.37	2.51	135.48	135.89	5.47	124.41	1212.60
Service wells.....\$1,000..	3,066	(13)	(13)	798	1,481	424	(11)	289	(8)	(13)	(13)	450	450	-
Per well.....do..	4.8	(13)	(13)	5.2	3.4	4.5	(11)	4.2	(8)	(13)	(13)	12.5	12.5	-
Per foot.....\$1.00..	3.21	(13)	(13)	1.91	3.28	3.34	(11)	3.44	(8)	(13)	(13)	4.29	4.29	-
Cost, excluding payments to subcontractors and ex- cluding cost of casing, tubing, and well equip- ment, total.....\$1,000..	396,554	4,722	157,833	49,292	184,707	61,435	6,860	17,200	5,218	26,179	5,978	35,795	32,224	3,571
Per well.....do..	20.6	9.3	35.9	14.5	16.9	20.9	18.5	19.9	11.7	25.5	25.1	16.3	14.9	91.6
Per foot.....\$1.00..	4.00	2.91	5.01	3.98	3.44	4.03	3.46	4.15	2.38	4.74	4.24	4.14	3.87	10.66
Oil wells.....\$1,000..	214,054	2,596	84,713	25,578	101,167	30,551	3,980	6,367	973	16,841	2,390	18,942	18,378	564
Per well.....do..	19.5	8.2	35.2	12.4	16.3	23.3	19.6	20.8	11.9	27.2	23.2	12.1	11.8	70.5
Per foot.....\$1.00..	4.00	2.61	5.21	3.88	3.39	4.16	3.36	4.06	2.41	4.74	3.76	3.67	3.62	6.71
Gas wells.....\$1,000..	44,583	747	20,008	4,347	19,481	6,993	(11)	1,291	8987	2,853	1,615	3,287	(12)	(12)
Per well.....do..	28.2	21.3	43.5	18.5	23.8	23.3	(11)	35.9	815.9	21.6	24.5	21.3	(12)	(12)
Per foot.....\$1.00..	4.24	5.37	5.65	3.63	3.60	4.20	(11)	5.45	83.13	4.52	3.71	3.61	(12)	(12)
Dry holes.....\$1,000..	135,394	131,379	135,112	18,681	62,973	23,467	112,880	9,253	3,258	136,485	13,973	13,121	121,340	123,007
Per well.....do..	22.4	138.7	134.8	19.6	18.2	19.0	117.1	20.4	10.8	1323.7	1328.6	29.9	1223.8	12297.0
Per foot.....\$1.00..	3.96	132.80	134.55	4.48	3.50	3.83	113.60	4.10	2.22	134.83	135.82	5.30	124.28	1211.98
Service wells.....\$1,000..	2,523	(13)	(13)	686	1,086	424	(11)	289	(8)	(13)	(13)	445	445	-
Per well.....do..	4.0	(13)	(13)	4.5	2.5	4.5	(11)	4.2	(8)	(13)	(13)	12.4	12.4	-
Per foot.....\$1.00..	2.64	(13)	(13)	1.64	2.41	3.34	(11)	3.44	(8)	(13)	(13)	4.24	4.24	-
Amount paid or due sub- contractors for drilling or equipping wells, total.....\$1,000..	37,541	240	15,680	4,475	17,146	7,774	143,769	1,286	355	2,364	(14)	1,586	1,337	249
Oil wells.....do..	19,079	66	7,545	3,522	7,946	4,178	141,965	728	32	1,453	(14)	1,042	948	94
Gas wells.....do..	4,482		1,414	2,607	848	14714	18	16	100		(14)	136	136	-
Dry holes.....do..	13,860	174	{6,706 15}	917	{6,524 69}	2,748	141,090	540	307	811	(14)	403	248	155
Service wells.....do..	120			36								5	5	-
Payments to drilling subcontractors in- cluding day work and turnkey, total.....do..	8,882	29	1,515	2,296	5,042	4,720	143,445	180	69	1,026	(14)	444	444	-
Oil wells.....do..	4,651	29	916	2,022	1,684	2,514	141,753	145		616	(14)	431	431	-
Gas wells.....do..	1,417		99	143	1,175	715	14714	1			(14)	3	3	-
Dry holes.....do..	2,809		500	126	2,183	1,491	14978	34	69	410	(14)	10	10	-
Service wells.....do..	5			5										-
Payments to other sub- contractors, total.....do..	28,659	211	14,165	2,179	12,104	3,054	14324	1,106	286	1,338	(14)	1,142	893	249
Oil wells.....do..	14,428	37	6,629	1,500	6,262	1,664	14212	583	32	837	(14)	611	517	94
Gas wells.....do..	3,065		1,315	1,432	133			17	16	100		133	133	-
Dry holes.....do..	11,051	174	{6,206 15}	648	{4,341 69}	1,257	112	506	238	401		393	238	155
Service wells.....do..	115			31								5	5	-
Cost of casing, tubing, and well equipment, total ¹⁵.....do..	10,031	857	2,358	2,282	4,534	956	14115	314	279	248	(14)	576	576	-
Oil wells.....do..	6,209	558	1,588	1,310	2,753	599	1490	246	77	186	(14)	531	531	-
Gas wells.....do..	1,936		411	896	627	97	1411	1	77	8	(14)	23	23	-
Dry holes.....do..	1,463	299	338		828	260	1414	67	125	54	(14)	22	22	-
Service wells.....do..	423		21	76	326									-

See footnotes on page 8.

Footnotes for Table 3B.--1381

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.
- ¹Only 6 dry holes were reported drilled by contractors classified in South Dakota.
- ²Represents West Virginia; 1 oil well drilled by contractors classified in Virginia; and 3 oil wells, 3 dry holes, and 2 service wells reported drilled by contractors classified in Florida.
- ³Only 3 oil wells and 6 dry holes were reported drilled by contractors classified in Tennessee.
- ⁴Only 3 oil wells and 5 dry holes were reported drilled by contractors classified in Nevada.
- ⁵Only 7 dry holes were reported drilled by contractors classified in Washington.
- ⁶Represents wells drilled which were completed during the year, and includes wells completed during the year, although begun in the previous year.
- ⁷Dry holes represent wells drilled and abandoned without commercial production during the year, even if converted to service wells. Service wells include gas-injection, water-injection, and brine-disposal wells, but exclude converted wells.
- ⁸Figure for service wells is included with that for gas wells.
- ⁹Respondents were asked to include the cost of labor, supplies, water, fuel, and power used in such operations as erecting and dismantling drilling rig and derrick, drilling hole, running and cementing casing, and hauling materials (including machinery and tool charges) insofar as such services were provided by the contractor who drilled the well. Respondents were asked to exclude such items as taxes, interest on investments, and overhead costs. The figures exclude payments made directly to other than drilling contractors by operators of oil and gas field properties.
- ¹⁰Figure for gas wells is included with that for oil wells.
- ¹¹Figures for gas wells and service wells are included with those for dry holes.
- ¹²Figure for gas wells is included with that for dry holes.
- ¹³Figure for service wells is included with that for dry holes.
- ¹⁴Figure for Utah and Nevada is included with that for Montana.
- ¹⁵Includes the cost of delivering and installing equipment. Excludes the value of equipment that was salvaged and used again but includes the cost of salvaging.

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1963 CENSUS OF MINERAL INDUSTRIES

MC63(P)-13D-2

INDUSTRY SERIES

Oil and gas exploration services

SIC Code 1382

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, receipts for services and shipments of the Oil and Gas Exploration Services Industry were valued at \$119.8 million, an increase of 37 percent over 1958, according to preliminary results obtained from the 1963 census. Average

employment in this industry showed an increase of less than one percent from 1958 to a total of 9,594 employees in 1963. Value added in mining amounted to \$90.0 million in 1963, an increase of 40 percent from 1958.

The Oil and Gas Exploration Services Industry represents establishments engaged primarily in geophysical, geological, and other exploration work on a contract, fee, or other basis.

This report includes figures for administrative offices, storage facilities, and other auxiliary

Table 1.—GENERAL STATISTICS FOR THE OIL AND GAS EXPLORATION SERVICES INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939
Establishments:					
Total.....	Number.....	355	347	330	(NA)
With 20 employees or more.....	do.....	67	76	(NA)	(NA)
All employees:					
Number.....	Number.....	9,594	9,557	11,488	(NA)
Payroll.....	Thousand dollars...	55,596	43,649	49,467	(NA)
Production, development, and exploration workers:					
Number.....	Number.....	7,229	7,559	10,010	(NA)
Man-hours.....	Thousand.....	16,144	16,695	23,978	(NA)
Wages.....	Thousand dollars...	36,892	31,115	40,813	(NA)
Value added in mining.....	do.....	90,028	64,353	81,301	(NA)
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	do.....	31,721	23,869	33,719	(NA)
Subcontract work only.....	do.....	5,361	3,643	6,547	(NA)
Cost of purchased machinery installed.....	do.....	10,051	6,075	6,537	(NA)
Receipts for services and shipments.....	do.....	119,802	87,215	114,815	12,642
Capital expenditures.....	do.....	11,998	7,082	6,742	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	819	(NA)	935	(NA)

(NA) Not available.

¹Excludes data for one establishment classified in Alaska.

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units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Establishments classified in the Oil and Gas Field Services Industries, in general, filed one report for all services performed in the United States. These reports were classified on the basis of the principal kind of work performed and the principal State in which the service was performed.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, purchased fuels and electric energy, subcontract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

RECEIPTS FOR SERVICES

The receipts reported by establishments classified in the Oil and Gas Exploration Services Industry consisted not only of services described above as primary to the industry, but also included receipts for secondary services (which are primary in other industries), value of a small amount of oil produced, and receipts for products purchased and resold without further processing at the establishment. The total receipts of establishments classified in the Oil and Gas Exploration Services Industry amounted to \$119.8 million in 1963. Of this total, \$107.0 million were services primary to the industry.

The total receipts of establishments classified in the industry should be clearly distinguished from the total value of primary services of the industry by all contractors. The latter figure, appearing in table 3, indicates that the value of primary services of this industry in 1963 was \$109.0 million. Of this total \$107.0 million or 98 percent represented services by establishments classified in the industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the performance of secondary services and the production of secondary products. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the receipts by all producers for the primary services of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority

1963 CENSUS OF MINERAL INDUSTRIES

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of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended,

to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE OIL AND GAS EXPLORATION SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all oil and gas field services performed in the United States. These reports were classified on the basis of the principal kind of work and the principal State in which the service was performed)

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and subcontract work	Cost of purchased machinery installed	Receipts for services and shipments	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	355	67	9,594	55,596	7,229	16,144	36,892	90,028	31,721	10,051	119,802	11,998	19,557	164,353
Middle Atlantic and East North Central.....	17	1	99	483	82	154	392	794	458	-	1,184	68	106	901
West North Central ²	17	3	256	1,318	196	441	954	2,079	1,916	80	3,792	283	212	1,874
South Atlantic and East South Central.....	21	3	359	1,400	344	673	1,295	2,104	1,266	176	3,300	246	862	3,714
Mississippi.....	8	3	326	1,161	314	620	1,076	1,757	1,087	144	2,781	207	847	3,573
West South Central	199	47	7,332	43,639	5,313	12,581	27,557	61,469	20,403	6,911	80,555	8,228	7,364	48,044
Louisiana.....	32	14	1,675	9,767	1,459	3,178	7,849	18,045	4,949	1,318	22,494	1,818	3,396	18,973
Oklahoma.....	25	6	1,505	10,690	510	1,278	2,582	7,407	1,864	924	9,060	1,135	381	2,686
Texas.....	138	27	4,143	23,147	3,336	8,107	17,094	35,959	13,574	4,669	48,931	5,271	3,581	26,228
Mountain.....	81	8	614	2,819	506	1,119	2,467	6,357	3,809	591	9,647	1,110	810	8,167
Wyoming.....	27	3	182	836	166	303	693	2,441	1,852	212	4,149	356	203	1,861
Colorado.....	20	1	108	602	101	240	579	1,303	628	270	1,709	492	(NA)	(NA)
New Mexico.....	13	2	180	835	133	347	740	1,274	898	52	2,172	52	415	4,475
Pacific.....	20	5	934	5,937	788	1,176	4,227	17,225	3,869	2,293	21,324	2,063	1203	11,653
California.....	14	2	639	3,694	517	762	2,218	10,633	1,794	1,880	12,957	1,350	(NA)	(NA)

- Represents zero.

(NA) Not available.

¹Excludes data for one establishment classified in Alaska.

²For 1963, all establishments were classified in Kansas.

Table 3.—PRIMARY SERVICES OF THE OIL AND GAS EXPLORATION SERVICES INDUSTRY PERFORMED BY ALL MINERAL INDUSTRIES,
BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all oil and gas field services performed in the United States. These reports were classified on the basis of the principal State in which the service was performed. Separate data were contained in these reports for the various kinds of work performed)

Type of service and geographic area	Receipts for services (\$1,000)	
	1963	1958
United States, total:		
Oil and gas field exploration services, total.....	108,992	84,647
Geophysical exploration.....	98,193	78,613
Other exploration.....	10,799	6,034
Middle Atlantic and East North Central:		
Oil and gas field exploration services, total.....	1,135	1,056
Geophysical exploration.....	657	(NA)
Other exploration.....	478	(NA)
West North Central: ¹		
Oil and gas field exploration services.....	3,796	3,084
Geophysical exploration.....	3,471	(NA)
South Atlantic and East South Central:		
Oil and gas field exploration services.....	2,837	3,959
Mississippi:		
Oil and gas field exploration services.....	2,337	3,714
West South Central:		
Oil and gas field exploration services, total.....	72,412	62,194
Geophysical exploration.....	69,134	58,599
Other exploration.....	3,278	3,595
Louisiana:		
Oil and gas field exploration services.....	19,562	22,884
Geophysical exploration.....	19,190	(NA)
Arkansas and Oklahoma:		
Oil and gas field exploration services.....	7,087	4,543
Geophysical exploration.....	7,009	(NA)
Texas:		
Oil and gas field exploration services, total.....	45,763	34,767
Geophysical exploration.....	42,935	31,923
Other exploration.....	2,828	2,844
Mountain:		
Oil and gas field exploration services.....	9,515	11,956
Geophysical exploration.....	6,092	(NA)
Montana:		
Oil and gas field exploration services.....	866	(NA)
Wyoming:		
Oil and gas field exploration services, total.....	4,010	2,299
Geophysical exploration.....	2,309	(NA)
Other exploration.....	1,701	(NA)
Colorado:		
Oil and gas field exploration services, total.....	1,718	(NA)
Geophysical exploration.....	584	(NA)
Other exploration.....	1,134	(NA)
New Mexico:		
Oil and gas field exploration services.....	2,138	7,100
Geophysical exploration.....	2,087	(NA)
Utah:		
Oil and gas field exploration services.....	557	(NA)
Pacific:		
Oil and gas field exploration services.....	19,297	2,398
California:		
Oil and gas field exploration services.....	13,679	(NA)
Geophysical exploration.....	13,611	(NA)
Washington and Alaska:		
Oil and gas field exploration services.....	5,618	(NA)

(NA) Not available.

¹For 1963, all reported by establishments classified in Kansas.

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MIC63(P)-13D-3

INDUSTRY SERIES

Miscellaneous oil and gas field services

SIC Code 1389

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Oil and Gas Field Services, N.E.C., Industry shipped products valued at \$719 million, an increase of 13 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment

in this industry showed an increase of one percent from 1958 to a total of 48 thousand employees in 1963. Value added in mining amounted to \$498 million in 1963, an increase of 9 percent from 1958.

The Oil and Gas Field Services, N.E.C., Industry represents establishments engaged primarily in performing oil and gas field services, not elsewhere classified, for others on a contract, fee, or other basis, such as excavating slush pits and cellars; grading, and building foundations at well locations; well surveying; running, cutting, and pulling casings, tubes, and rods; cementing

Table 1A.—GENERAL STATISTICS FOR THE OIL AND GAS FIELD SERVICES, N.E.C., INDUSTRY IN THE UNITED STATES IN SELECTED YEARS

Item	Unit of measure	1963	1958 ¹	1954	1939 ²
Establishments:					
Total.....	Number.....	3,025	2,504	2,316	³ 558
With 20 employees or more.....	...do.....	435	411	(NA)	(NA)
All employees:					
Number.....	Number.....	47,592	47,278	46,425	11,267
Payroll.....	Thousand dollars...	260,851	228,023	187,867	14,989
Production, development, and exploration workers:					
Number.....	Number.....	39,129	38,212	39,976	10,007
Man-hours.....	Thousand.....	83,998	86,060	90,081	13,950
Wages.....	Thousand dollars...	199,314	166,926	147,047	11,815
Value added in mining.....	...do.....	498,098	455,994	413,276	(NA)
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	...do.....	226,715	182,104	138,394	(NA)
Subcontract work only.....	...do.....	13,749	9,767	9,731	(NA)
Cost of purchased machinery installed.....	...do.....	62,054	37,843	49,483	(NA)
Receipts for services and shipments.....	...do.....	718,707	633,729	543,460	46,790
Capital expenditures.....	...do.....	68,160	42,212	57,693	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	3,411	(NA)	2,876	168

(NA) Not available.

¹Excludes data for one establishment with 0-4 employees in Alaska.

²Excludes data for establishments primarily engaged in well-surveying and well-logging services. The total receipts for services by such establishments in 1939 was \$5,028 thousand.

³Represents number of operating companies.

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wells; shooting wells; perforating well casing; acidizing and chemically treating wells; and cleaning out, bailing, and swabbing wells. Establishments primarily engaged in hauling oil and gas field supplies and equipment, and in oil and gas field machine shop work, are not included in the Mining Division. Separate figures are shown in this report for two subindustries, "Well Surveying, Well Logging, and Cementing Wells Services," and "Miscellaneous Oil and Gas Field Services."

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report.

Establishments classified in the oil and gas field services industries, in general, filed one report for all contract services performed in the United States. These reports were classified on the basis of the principal kind of work performed and the principal State in which the service was performed. The Oil and Gas Field Services, N.E.C., Industry includes establishments producing crude petroleum and natural gas whose receipts for contract work were greater than the value of shipments of oil and gas. In such cases, separate reports were required for each State in which the company operated wells. Companies were permitted, however, to prepare separate reports for their oil and gas production and their contract service activities, and a few companies prepared such separate reports, thus permitting the companies to combine their contract services operations for all States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll period ended nearest the 15th of March, May, August, and November plus the number of all other employees about March 15. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the

15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of receipts and shipments plus capital expenditures less the cost of supplies, purchased fuels and electric energy, subcontract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

RECEIPTS FOR SERVICES

The receipts for services and shipments reported by establishments classified in the Oil and Gas Field Services, N.E.C., Industry consisted not only of services described above as primary to the industry, but also includes receipts for secondary services (which are primary in other industries), receipts for oil and gas produced, and receipts for products purchased and resold without further processing at the establishment. The total receipts of establishments classified in the Oil and Gas Field Services, N.E.C., Industry amounted to \$719 million. Of this total, nearly 90 percent was for services primary to the industry.

The total receipts of establishments classified in an industry should be clearly distinguished from the total value of primary services of the industry by all contractors. The latter figures, appearing in table 3, indicate that receipts for primary services of this industry in 1963 were \$617 million. Of this total, over 95 percent represented services by establishments classified in the industry, while the remainder represented services which were secondary activities of establishments classified in other industries.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the performance of secondary services and the production of secondary products. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which shows the receipts by all companies for services primary to this industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry reports and final area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices

may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th Census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE WELL SURVEYING, WELL LOGGING, AND CEMENTING WELLS SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	245	199	124	(NA)
With 20 employees or more.....	..do.....	28	33	(NA)	(NA)
All employees:					
Number.....	Number.....	10,308	12,081	10,468	(NA)
Payroll.....	Thousand dollars...	75,418	74,857	53,733	(NA)
Production, development, and exploration workers:					
Number.....	Number.....	8,213	8,180	7,698	(NA)
Man-hours.....	Thousand.....	20,511	20,782	23,934	(NA)
Wages.....	Thousand dollars...	54,867	45,186	33,846	(NA)
Value added in mining.....	..do.....	172,614	167,391	145,686	(NA)
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	..do.....	73,216	55,019	53,088	(NA)
Subcontract work only.....	..do.....	997	169	1,429	(NA)
Cost of purchased machinery installed.....	..do.....	22,102	10,133	14,518	(NA)
Receipts for services and shipments.....	..do.....	244,008	220,829	191,336	14,395
Capital expenditures.....	..do.....	23,924	11,714	21,956	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	1,086	(NA)	993	(NA)

(NA) Not available.

Table 1C.—GENERAL STATISTICS FOR THE MISCELLANEOUS OIL AND GAS FIELD SERVICES SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	2,780	2,305	2,192	¹ 535
With 20 employees or more.....	..do.....	407	378	(NA)	(NA)
All employees:					
Number.....	Number.....	37,284	35,197	35,957	10,227
Payroll.....	Thousand dollars...	185,433	153,166	134,134	12,635
Production, development, and exploration workers:					
Number.....	Number.....	30,916	30,032	32,278	9,169
Man-hours.....	Thousand.....	63,487	65,278	66,147	12,235
Wages.....	Thousand dollars...	144,447	121,740	113,201	10,055
Value added in mining.....	..do.....	325,484	288,603	267,590	(NA)
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	..do.....	153,499	127,085	85,306	(NA)
Subcontract work only.....	..do.....	12,752	9,598	8,302	(NA)
Cost of purchased machinery installed.....	..do.....	39,952	27,710	34,965	(NA)
Receipts for services and shipments.....	..do.....	474,699	412,900	352,124	32,395
Capital expenditures.....	..do.....	44,236	30,498	35,737	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	2,325	(NA)	1,883	130

(NA) Not available.

¹Represents number of operating companies.

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Table 2.—GENERAL STATISTICS FOR THE OIL AND GAS FIELD SERVICES, N.E.C., INDUSTRY, BY GEOGRAPHIC AREAS AND SUBINDUSTRIES: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees, number		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and sub-contract work	Cost of purchased machinery installed	Receipts for services and shipments	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	3,025	435	47,592	260,851	39,129	83,998	199,314	498,098	226,715	62,054	718,707	68,160	147,278	1455,994
Middle Atlantic.....	72	3	312	1,239	281	582	1,062	2,369	772	168	3,123	186	3,261	23,241
North Central.....	545	40	3,843	15,940	3,282	6,318	13,190	32,677	9,588	3,140	41,654	3,751		
South Atlantic and East South Central..	139	12	1,156	4,277	1,030	1,984	3,772	9,440	2,455	1,782	11,724	1,953	1,066	6,580
West South Central...	1,753	307	36,451	206,768	29,694	65,373	155,056	396,173	197,938	50,678	589,033	55,756	38,860	387,856
Arkansas.....	38	4	357	1,190	326	611	1,050	2,292	519	225	2,799	237	271	1,863
Louisiana.....	276	72	10,507	66,041	8,376	18,155	45,854	104,491	64,547	14,119	166,695	16,462	6,256	49,750
Oklahoma.....	353	45	3,497	13,563	3,059	5,337	11,693	26,574	7,173	2,578	33,452	2,873	3,734	21,687
Texas.....	1,086	186	22,090	125,974	17,933	41,270	96,459	262,816	125,699	33,756	386,087	36,184	28,599	314,556
Mountain.....	326	40	3,123	14,518	2,733	5,657	12,740	28,859	7,284	3,921	36,376	3,688	2,174	19,149
Wyoming.....	86	9	676	3,647	570	1,241	3,144	7,913	2,097	790	9,888	912	325	3,300
Colorado.....	45	2	222	1,219	194	417	1,049	2,415	581	456	3,083	369	350	3,199
New Mexico.....	134	20	1,562	6,561	1,414	2,719	5,688	13,015	3,267	1,890	16,314	1,858	1,125	9,604
Utah.....	23	4	298	1,670	281	646	1,577	2,977	753	681	3,978	433	207	1,555
Pacific.....	190	33	2,707	18,109	2,109	4,084	13,494	28,580	8,678	2,365	36,797	2,826	1,917	19,168
California.....	184	32	2,643	17,505	2,050	3,952	12,994	27,158	8,594	2,274	35,400	2,626	1,917	19,168
SURVEY, LOG, AND CEMENT SERVICES														
United States, total.....	245	28	10,308	75,418	8,213	20,511	54,867	172,614	73,216	22,102	244,008	23,924	12,081	167,391
Northeast and North Central.....	35	2	263	1,438	185	441	1,065	3,409	1,345	149	4,716	187	354	3,584
Kansas.....	15	2	152	889	118	279	750	2,094	964	44	3,039	63	100	1,228
South Atlantic and East South Central..	11	1	97	563	87	204	517	1,628	390	903	1,991	930	15	153
West South Central...	142	21	9,567	71,075	7,670	19,234	51,611	162,368	69,658	20,752	230,670	22,108	11,407	160,301
Louisiana.....	30	8	3,933	29,546	2,860	6,343	17,080	59,806	24,148	7,940	83,354	8,540	501	5,156
Texas.....	89	12	5,479	40,651	4,681	12,551	33,774	100,747	44,885	12,766	144,945	13,453	9,922	152,224
Mountain.....	29	1	135	652	96	220	452	2,007	344	35	2,225	161	102	916
Wyoming.....	9	-	31	147	23	58	121	850	84	14	884	64	(NA)	(NA)
New Mexico.....	8	-	47	223	37	90	183	655	138	2	750	45	16	281
Pacific.....	28	3	246	1,690	175	412	1,222	3,202	1,479	263	4,406	538	203	2,437
MISCELLANEOUS OIL AND GAS FIELD SERVICES														
United States, total.....	2,780	407	37,284	185,433	30,916	63,487	144,447	325,484	153,499	39,952	474,699	44,236	35,197	288,603
Northeast and North Central.....	582	41	3,892	15,741	3,378	6,459	13,187	31,637	9,015	3,159	40,061	3,750	2,907	19,657
South Atlantic and East South Central..	128	11	1,059	3,714	943	1,780	3,255	7,812	2,065	879	9,733	1,023	1,051	6,427
West South Central...	1,611	286	26,884	135,693	22,024	46,139	103,445	233,805	128,280	29,926	358,363	33,648	27,453	227,555
Louisiana.....	246	64	6,574	36,495	5,516	11,812	28,774	44,685	40,399	6,179	83,341	7,922	5,755	44,594
Texas.....	997	174	16,611	85,323	13,252	28,719	62,685	162,069	80,814	20,990	241,142	22,731	18,677	162,332
Mountain.....	297	39	2,988	13,866	2,637	5,437	12,288	26,852	6,940	3,886	34,151	3,527	2,072	18,233
Montana.....	31	5	326	1,303	238	568	1,173	2,326	516	104	2,839	107	(NA)	(NA)
Wyoming.....	77	9	645	3,500	547	1,183	3,023	7,063	2,013	776	9,004	848	(NA)	(NA)
New Mexico.....	126	20	1,515	6,338	1,377	2,629	5,505	12,360	3,129	1,888	15,564	1,813	1,109	9,323
Utah.....	20	4	296	1,662	279	642	1,569	2,943	747	670	3,938	422	(NA)	(NA)
Pacific.....	162	30	2,461	16,419	1,934	3,672	12,272	25,378	7,199	2,102	32,391	2,288	1,714	16,731

(NA) Not available.

¹Excludes data for one establishment with 0-4 employees in Alaska.

Table 3.—PRIMARY SERVICES OF THE OIL AND GAS FIELD SERVICES, N.E.C., INDUSTRY PERFORMED BY ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all oil and gas field contract services performed in the United States. Separate data were obtained in these reports for the various kinds of work performed. These reports were classified on the basis of the principal type of service performed and the principal State in which services were performed.)

Type of service and geographic area	Receipts for services (\$1,000)		Type of service and geographic area	Receipts for services (\$1,000)	
	1963	1958		1963	1958
UNITED STATES			Nebraska		
Oil and gas field services, n.e.c., total.....	667,970	578,104	Oil and gas field services, n.e.c.....	3,161	2,069
Well surveying and well logging.....	118,186	99,547	Kansas		
Cementing wells.....	86,796	81,668	Oil and gas field services, n.e.c.....	21,054	14,385
Building, repairing, and dismantling rigs and derricks.....	13,608	10,154	Well surveying, well logging, and cementing wells.....	2,458	(NA)
Excavating slush pits and cellars.....	7,388	8,833	Running, cutting, and pulling casing, tubes, and rods.....	4,336	5,724
Running, cutting, and pulling casing, tubes, and rods.....	58,482	55,288	Perforating well casing.....	658	(NA)
Perforating well casing.....	24,147	39,164	Cleaning out, bailing out, and swabbing wells...	919	(NA)
Acidizing and other chemical treatment of wells...	77,682	69,440	Installing production equipment, such as wellhead fittings, pumps, and engines.....	1,154	(NA)
Cleaning out, bailing out, and swabbing wells...	37,767	39,329	Pumping wells but not operating leases.....	533	(NA)
Installing production equipment, such as wellhead fittings, pumps, and engines.....	24,024	16,812	SOUTH ATLANTIC		
Erecting, cleaning, repairing, and dismantling lease tanks.....	5,866	6,558	Oil and gas field services, n.e.c.....	2,418	1,669
Pumping wells but not operating leases.....	4,833	5,554	West Virginia		
Other oil and gas field services.....	209,191	145,757	Oil and gas field services, n.e.c.....	2,384	(NA)
MIDDLE ATLANTIC			EAST SOUTH CENTRAL		
Oil and gas field services, n.e.c.....	3,189	3,189	Oil and gas field services, n.e.c.....	11,667	8,723
Running, cutting, and pulling casing, tubes, and rods.....	640	(NA)	Well surveying, well logging, and cementing wells.....	1,973	(NA)
New York			Running, cutting, and pulling casing, tubes, and rods.....	1,696	2,129
Oil and gas field services, n.e.c.....	699	(NA)	Cleaning out, bailing out, and swabbing wells...	642	1,153
Pennsylvania			Installing production equipment, such as wellhead fittings, pumps, and engines.....	2,397	(NA)
Oil and gas field services, n.e.c.....	2,490	(NA)	Kentucky		
Running, cutting, and pulling casing, tubes, and rods.....	515	(NA)	Oil and gas field services, n.e.c.....	3,776	(NA)
EAST NORTH CENTRAL			Running, cutting, and pulling casing, tubes, and rods.....	642	(NA)
Oil and gas field services, n.e.c.....	14,713	9,080	Alabama		
Well surveying and well logging.....	643	1,886	Oil and gas field services, n.e.c.....	1,702	(NA)
Cementing wells.....	747		Mississippi		
Running, cutting, and pulling casing, tubes, and rods.....	3,651	2,664	Oil and gas field services, n.e.c.....	6,199	6,080
Cleaning out, bailing out, and swabbing wells...	1,688	(NA)	Running, cutting, and pulling casing, tubes, and rods.....	1,054	1,873
Installing production equipment, such as wellhead fittings, pumps, and engines.....	1,139	(NA)	Installing production equipment, such as wellhead fittings, pumps, and engines.....	914	(NA)
Ohio			WEST SOUTH CENTRAL		
Oil and gas field services, n.e.c.....	2,808	(NA)	Oil and gas field services, n.e.c.....	530,378	489,720
Running, cutting, and pulling casing, tubes, and rods.....	1,297	(NA)	Well surveying and well logging.....	108,856	93,695
Illinois			Cementing wells.....	81,799	77,401
Oil and gas field services, n.e.c.....	8,870	6,482	Building, repairing, and dismantling rigs and derricks.....	12,410	7,020
Well surveying, well logging, and cementing wells.....	840	1,676	Excavating slush pits and cellars.....	4,528	5,614
Running, cutting, and pulling casing, tubes, and rods.....	1,784	1,411	Running, cutting, and pulling casing, tubes, and rods.....	37,110	37,288
Cleaning out, bailing out, and swabbing wells...	1,059	(NA)	Perforating well casing.....	19,483	37,749
Installing production equipment, such as wellhead fittings, pumps, and engines.....	898	(NA)	Acidizing and other chemical treatment of wells...	72,957	66,838
Michigan			Cleaning out, bailing out, and swabbing wells...	24,798	27,506
Oil and gas field services, n.e.c.....	2,340	1,018	Installing production equipment, such as wellhead fittings, pumps, and engines.....	14,914	11,883
WEST NORTH CENTRAL			Erecting, cleaning, repairing, and dismantling lease tanks.....	4,347	4,575
Oil and gas field services, n.e.c.....	28,912	19,420	Pumping wells, but not operating leases.....	2,530	3,642
Well surveying and well logging.....	1,106	1,188	Other oil and gas field services.....	146,646	116,509
Cementing wells.....	1,654	1,169	Louisiana		
Excavating slush pits and cellars.....	953	1,059	Oil and gas field services, n.e.c.....	159,286	82,460
Running, cutting, and pulling casing, tubes, and rods.....	5,890	6,408	Well surveying, well logging, and cementing wells.....	77,646	(NA)
Perforating well casing.....	697	(NA)	Building, repairing, and dismantling rigs and derricks.....	2,678	2,711
Acidizing and other chemical treatment of wells...	1,365	(NA)	Running, cutting, and pulling casing, tubes, and rods.....	4,311	4,263
Cleaning out, bailing out, and swabbing wells...	1,272	1,419	Perforating well casing.....	2,046	(NA)
Installing production equipment, such as wellhead fittings, pumps, and engines.....	2,075	1,482	Cleaning out, bailing out, and swabbing wells...	4,257	2,782
Pumping wells but not operating leases.....	785	(NA)	Installing production equipment, such as wellhead fittings, pumps, and engines.....	7,136	4,245
North Dakota			Erecting, cleaning, repairing, and dismantling lease tanks.....	549	(NA)
Oil and gas field services, n.e.c.....	4,803	2,913			
Running, cutting, and pulling casing, tubes, and rods.....	1,459	(NA)			

See footnote at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

Table 3.--PRIMARY SERVICES OF THE OIL AND GAS FIELD SERVICES, N.E.C., INDUSTRY PERFORMED BY ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958--Continued

Type of service and geographic area	Receipts for services (\$1,000)		Type of service and geographic area	Receipts for services (\$1,000)	
	1963	1958		1963	1958
Texas			Wyoming		
Oil and gas field services, n.e.c., total.....	330,533	377,755	Oil and gas field services, n.e.c.....	8,897	4,026
Well surveying, well logging, and cementing wells.....	108,460	160,833	Well surveying, well logging, and cementing wells.....	1,204	(NA)
Building, repairing, and dismantling rigs and derricks.....	9,015	3,782	Running, cutting, and pulling casing, tubes, and rods.....	1,427	(NA)
Excavating slush pits and cellars.....	3,058	3,269	Perforating well casing.....	785	(NA)
Running, cutting, and pulling casing, tubes, and rods.....	26,144	26,541	Cleaning out, bailing out, and swabbing wells...	1,033	(NA)
Perforating well casing.....	14,860	36,632	Installing production equipment, such as wellhead fittings, pumps, and engines.....	569	(NA)
Acidizing and other chemical treatment of wells.	71,492	65,665	Colorado		
Cleaning out, bailing out, and swabbing wells...	14,490	18,220	Oil and gas field services, n.e.c.....	3,092	(NA)
Installing production equipment, such as wellhead fittings, pumps, and engines.....	5,618	6,069	Running, cutting, and pulling casing, tubes, and rods.....	866	(NA)
Erecting, cleaning, repairing, and dismantling lease tanks.....	2,684	2,843	New Mexico		
Pumping wells but not operating leases.....	1,625	2,612	Oil and gas field services, n.e.c.....	16,469	11,976
Other oil and gas field services.....	73,087	51,289	Well surveying, well logging, and cementing wells.....	979	(NA)
Arkansas and Oklahoma			Running, cutting, and pulling casing, tubes, and rods.....	2,578	2,620
Oil and gas field services, n.e.c., total.....	40,559	29,505	Acidizing and other chemical treatment of wells.	687	(NA)
Well surveying, well logging, and cementing wells.....	4,549	3,660	Cleaning out, bailing out, and swabbing wells...	1,881	1,721
Building, repairing, and dismantling rigs and derricks.....	717	(NA)	Utah		
Excavating slush pits and cellars.....	1,086	1,230	Oil and gas field services, n.e.c.....	3,954	2,243
Running, cutting, and pulling casing, tubes, and rods.....	6,655	6,484	Installing production equipment, such as wellhead fittings, pumps, and engines.....	1,169	(NA)
Perforating well casing.....	2,577	(NA)	Pacific		
Acidizing and other chemical treatment of wells.	1,337	(NA)	Oil and gas field services, n.e.c.....	40,997	22,502
Cleaning out, bailing out, and swabbing wells...	6,051	6,504	Well surveying and well logging.....	3,403	3,198
Installing production equipment, such as wellhead fittings, pumps, and engines.....	2,160	1,569	Cementing wells.....	813	
Erecting, cleaning, repairing, and dismantling lease tanks.....	1,114	1,001	Building, repairing, and dismantling rigs and derricks.....	726	2,118
Pumping wells but not operating leases.....	625	(NA)	Excavating slush pits and cellars.....	709	(NA)
Other oil and gas field services.....	13,688	(NA)	Running, cutting, and pulling casing, tubes, and rods.....	3,791	2,021
Mountain			Perforating well casing.....	1,169	(NA)
Oil and gas field services, n.e.c.....	35,620	23,801	Acidizing and other chemical treatment of wells.	1,095	(NA)
Well surveying, well logging, and cementing wells.....	2,940	1,073	Cleaning out, bailing out, and swabbing wells...	4,860	3,668
Excavating slush pits and cellars.....	666	1,393	Installing production equipment, such as wellhead fittings, pumps, and engines.....	506	(NA)
Running, cutting, and pulling casing, tubes, and rods.....	5,275	3,892	California		
Perforating well casing.....	1,482	(NA)	Oil and gas field services, n.e.c.....	39,694	(NA)
Acidizing and other chemical treatment of wells.	1,368	(NA)	Running, cutting, and pulling casing, tubes, and rods.....	3,791	(NA)
Cleaning out, bailing out, and swabbing wells...	3,735	3,904	Perforating well casing.....	1,169	(NA)
Installing production equipment, such as wellhead fittings, pumps, and engines.....	2,965	2,610	Acidizing and other chemical treatment of wells.	1,095	(NA)
Erecting, cleaning, repairing, and dismantling lease tanks.....	596	(NA)	Installing production equipment, such as wellhead fittings, pumps, and engines.....	506	(NA)
Pumping wells but not operating leases.....	520	(NA)			

(NA) Not available.

PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

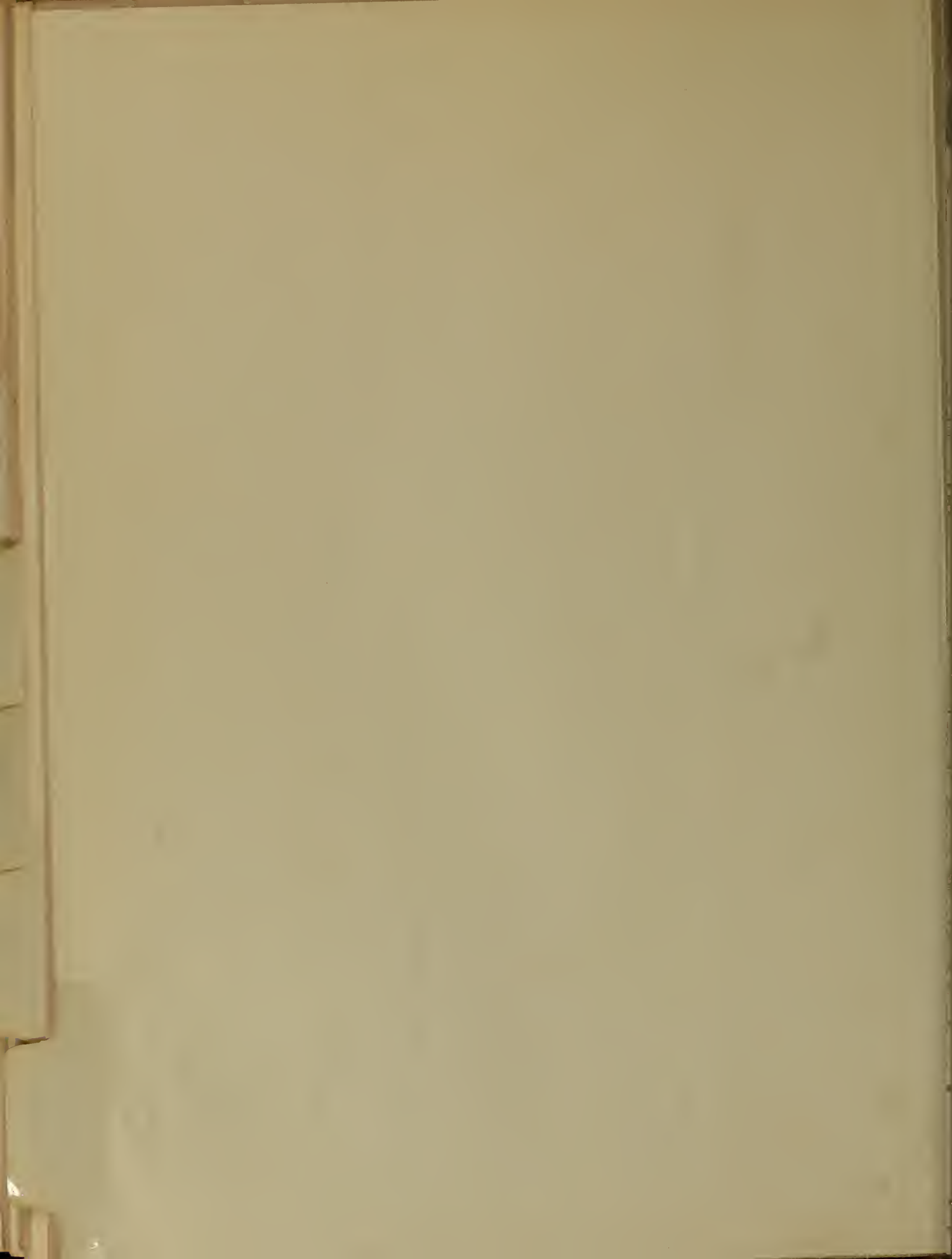
A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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1963 CENSUS OF MINERAL INDUSTRIES

MC63(P)-14B-1

INDUSTRY SERIES

preliminary
report

Dimension stone

SIC Code 1411

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, dimension stone quarries, including associated dressing plants shipped products valued at \$103.4 million, an increase of 16 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in these operations showed a decrease of 12 percent from

1958 to a total of 10.8 thousand employees in 1963. Value added in mining amounted to \$69.2 million in 1963, an increase of 3 percent from 1958.

The above figures include data for both separately operated quarries, which are classified in the mineral industry, Dimension Stone, and quarries with dressing plants which are included as part of the manufacturing industry, Cut Stone and Stone Products. The value of shipments of separately operated dimension stone quarries in 1963 was \$19.7 million, an increase of 24 percent over 1958. Average employment at such quarries showed a decrease of 5 percent from 1958 to a total of 2.2

Table 1A.—GENERAL STATISTICS FOR ALL DIMENSION STONE QUARRIES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954		
		Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants
Establishments:										
Total.....	Number.....	550	319	231	557	335	222	555	351	204
With 20 employees or more.....	...do.....	106	25	81	119	26	93	115	46	69
All employees:										
Number.....	Number.....	10,799	2,181	8,618	12,250	2,306	9,944	12,325	3,224	9,101
Payroll.....	1,000 dollars.	46,003	8,040	37,963	44,911	7,121	37,790	40,227	8,625	31,602
Production, development, and exploration workers:										
Number.....	Number.....	9,462	1,974	7,488	10,825	2,055	8,770	11,389	3,068	8,321
Man-hours.....	Thousand.....	19,084	3,806	15,278	20,679	3,690	16,989	23,155	5,893	17,262
Wages.....	1,000 dollars.	38,379	6,995	31,384	36,768	6,067	30,701	35,364	7,938	27,426
Value added in mining.....	...do.....	69,250	14,743	54,507	67,131	13,076	54,055	61,774	15,155	46,619
Cost of supplies, rough stone received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	35,009	5,242	29,767	23,190	3,458	19,732	17,321	3,846	13,475
Rough stone received for preparation only.....	...do.....	2,919	-	2,919	1,926	-	1,926	1,512	-	1,512
Contract work only.....	...do.....	1,075	632	443	1,240	380	860	1,208	574	634
Cost of purchased machinery installed.....	...do.....	3,964	630	3,334	2,845	531	2,314	2,664	891	1,773
Value of shipments and receipts.....	...do.....	103,418	19,697	83,721	89,461	15,864	73,597	78,903	18,945	59,958
Value of net shipments and receipts.....	...do.....	100,499	19,697	80,802	83,446	15,719	67,727	76,282	18,418	57,864
Capital expenditures.....	...do.....	4,805	918	3,887	3,705	1,201	2,504	2,856	947	1,909
Horsepower rating of power equipment.....	1,000 hp.....	(NA)	67	(NA)	(NA)	(NA)	(NA)	262	94	168

- Represents zero. (NA) Not available.

June 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



thousand employees in 1963. Value added in mining at such quarries amounted to \$14.7 million in 1963, an increase of 13 percent from 1958.

The Dimension Stone Industry represents establishments engaged primarily in mining or quarrying dimension stone. Also included are establishments primarily engaged in producing rough blocks and slabs. Establishments primarily engaged in mining or quarrying and shaping grindstones, pulpstones, millstones, burrstones, and sharpening stones are classified in Industry 1497; and those mining or quarrying dimension soapstone in Industry 1496. Establishments primarily engaged in dressing (shaping, polishing, or otherwise finishing) rough blocks and slabs are classified in Industry 3281, Cut Stone and Stone Products. Nepheline syenite operations are classified in Industry 1459. This report includes, but also shows separately in tables 1 and 2, figures for the quarries with dressing plants which are classified in Industry 3281. Separate figures are also shown for quarries, without and with dressing plants, which produce three major classes of stone. The dimension stone subindustries are:

Dimension Limestone Subindustry, which represents establishments primarily engaged in mining or quarrying dimension limestone, including related rocks such as dolomite, travertine, and calcareous tufa;

Dimension Granite Subindustry, which represents establishments primarily engaged in mining or quarrying dimension granite, including related rocks such as gneiss, syenite, diorite, and gabbro;

Dimension Stone, N.E.C., Subindustry, which represents establishments primarily engaged in mining or quarrying dimension stone, not elsewhere classified, such as slate, marble, trap rock (basalt, diabase, and related rocks), sandstone and bluestone, mica schist, light-colored volcanic rocks, argillite, and greenstone.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represent the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of the Dimension Stone Industry in 1963 amounted to \$19.7 million. Of this total, only about \$0.5 million represented products primary to other industries and miscellaneous receipts.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure, appearing in table 3A, indicates that the value of gross shipments of rough dimension stone by all quarries was \$25.7 million. Of this total, \$19.3 million, or 75 percent, were shipped by quarries classified in Industry 1411, while the remainder was shipped by quarries classified in other industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment

to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. No stone was received for preparation in the Dimension Stone Industry, but for all quarries, including those with associated dressing plants, the value of gross shipments and receipts in 1963 was \$103.4 million and the value of net shipments and receipts was \$100.5 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the Dimension Stone Industry and also for the primary products of quarries with associated dressing plants shipped by all quarries, including those in other industries. These are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment

as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, it was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.--GENERAL STATISTICS FOR DIMENSION LIMESTONE QUARRIES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954		
		Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants
Establishments:										
Total.....	Number.....	110	61	49	124	68	56	106	65	41
With 20 employees or more.....	...do.....	22	5	17	28	8	20	29	11	18
All employees:										
Number.....	Number.....	2,184	351	1,833	2,631	583	2,048	2,850	500	2,350
Payroll.....	1,000 dollars	10,464	1,462	9,002	10,739	2,120	8,619	10,359	1,556	8,803
Production, development, and exploration workers:										
Number.....	Number.....	1,854	287	1,567	2,330	491	1,839	2,693	472	2,221
Man-hours.....	Thousand....	3,766	562	3,204	4,201	879	3,322	5,391	872	4,519
Wages.....	1,000 dollars	8,682	1,111	7,571	8,837	1,592	7,245	9,479	1,429	8,050
Value added in mining.....	...do.....	15,196	2,906	12,290	16,386	3,741	12,645	16,686	2,942	13,744
Cost of supplies, rough stone received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	6,766	707	6,059	4,262	641	3,621	3,717	779	2,938
Rough stone received for preparation only.....	...do.....	315	-	315	130	-	130	75	-	75
Contract work only.....	...do.....	298	160	138	399	91	308	204	52	152
Cost of purchased machinery installed.....	...do.....	877	118	759	846	294	552	862	158	704
Value of shipments and receipts.....	...do.....	21,721	3,513	18,208	20,417	4,174	16,243	20,493	3,754	16,739
Value of net shipments and receipts.....	...do.....	21,406	3,513	17,893	19,592	4,174	15,418	20,062	3,398	16,664
Capital expenditures.....	...do.....	1,118	218	900	1,077	502	575	772	125	647
Horsepower rating of power equipment.....	1,000 hp.....	(NA)	12	(NA)	(NA)	(NA)	(NA)	72	17	55

- Represents zero. (NA) Not available.

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Table 1C.—GENERAL STATISTICS FOR DIMENSION GRANITE QUARRIES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954		
		Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants
Establishments:										
Total.....	Number.....	136	66	70	137	76	61	143	86	57
With 20 employees or more.....	...do.....	41	10	31	44	9	35	42	15	27
All employees:										
Number.....	Number.....	3,257	824	2,433	3,897	740	3,157	4,009	967	3,042
Payroll.....	1,000 dollars	14,985	3,601	11,384	15,623	2,288	13,335	13,701	2,639	11,062
Production, development, and exploration workers:										
Number.....	Number.....	2,828	774	2,054	3,465	681	2,784	3,662	917	2,745
Man-hours.....	Thousand.....	5,725	1,635	4,090	6,731	1,277	5,454	7,445	1,769	5,676
Wages.....	1,000 dollars	12,053	3,277	8,776	12,645	2,046	10,599	11,806	2,404	9,402
Value added in mining.....	...do.....	24,589	6,458	18,131	24,315	4,085	20,230	20,976	4,590	16,386
Cost of supplies, rough stone received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	13,776	3,027	10,749	10,229	1,620	8,609	7,561	1,167	6,394
Rough stone received for preparation only.....	...do.....	1,059	-	1,059	478	-	478	765	-	765
Contract work only.....	...do.....	418	181	237	310	41	269	352	149	203
Cost of purchased machinery installed.....	...do.....	899	156	743	582	89	493	826	226	600
Value of shipments and receipts.....	...do.....	38,123	9,388	28,735	34,408	5,577	28,831	28,498	5,738	22,760
Value of net shipments and receipts.....	...do.....	37,064	9,388	27,676	31,430	5,517	25,913	27,733	5,738	21,995
Capital expenditures.....	...do.....	1,141	253	888	718	217	501	865	245	620
Horsepower rating of power equipment.....	1,000 hp.....	(NA)	27	(NA)	(NA)	(NA)	(NA)	85	30	55

- Represents zero. (NA) Not available.

Table 1D.—GENERAL STATISTICS FOR DIMENSION STONE QUARRIES, N.E.C., IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954		
		Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants	Total	Quarries only	Quarries with dressing plants
Establishments:										
Total.....	Number.....	304	192	112	296	191	105	306	200	106
With 20 employees or more.....	...do.....	43	10	33	47	9	38	44	20	24
All employees:										
Number.....	Number.....	5,358	1,006	4,352	5,722	983	4,739	5,466	1,757	3,709
Payroll.....	1,000 dollars	20,554	2,977	17,577	18,549	2,713	15,836	16,167	4,430	11,737
Production, development, and exploration workers:										
Number.....	Number.....	4,780	913	3,867	5,030	883	4,147	5,034	1,679	3,355
Man-hours.....	Thousand.....	9,593	1,609	7,984	9,747	1,534	8,213	10,319	3,252	7,067
Wages.....	1,000 dollars	17,644	2,607	15,037	15,286	2,429	12,857	14,079	4,105	9,974
Value added in mining.....	...do.....	29,465	5,379	24,086	26,430	5,250	21,180	24,112	7,623	16,489
Cost of supplies, rough stone received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	14,467	1,508	12,959	8,699	1,197	7,502	6,043	1,900	4,143
Rough stone received for preparation only.....	...do.....	1,545	-	1,545	1,318	-	1,318	672	-	672
Contract work only.....	...do.....	359	291	68	531	248	283	652	373	279
Cost of purchased machinery installed.....	...do.....	2,188	356	1,832	1,417	148	1,269	976	507	469
Value of shipments and receipts.....	...do.....	43,574	6,796	36,778	34,636	6,113	28,523	29,912	9,453	20,459
Value of net shipments and receipts.....	...do.....	42,029	6,796	35,233	32,424	6,028	26,396	28,487	9,282	19,205
Capital expenditures.....	...do.....	2,546	447	2,099	1,910	482	1,428	1,219	577	642
Horsepower rating of power equipment.....	1,000 hp.....	(NA)	28	(NA)	(NA)	(NA)	(NA)	105	46	59

- Represents zero. (NA) Not available.

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Table 2.—GENERAL STATISTICS FOR DIMENSION STONE QUARRIES BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry, geographic area, and type of operation	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for prep- aration, pur- chased energy, and contract work	Cost of pur- chased machin- ery in- stalled	Value of shipments and receipts	Capital expendi- tures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
ALL DIMENSION STONE QUARRIES														
United States, total.....	550	106	10,799	46,003	9,462	19,084	38,379	69,250	35,009	3,964	103,418	4,805	12,250	67,131
Quarries only (dimension stone industry)	319	25	2,181	8,040	1,974	3,806	6,995	14,743	5,242	630	19,697	918	2,306	13,076
Quarries with dressing plants	231	81	8,618	37,963	7,488	15,278	31,384	54,507	29,767	3,334	83,721	3,887	9,944	54,055
New England, total....	52	17	2,310	11,222	2,054	4,361	9,430	16,478	7,955	919	24,310	1,042	2,831	14,924
Quarries only.....	21	4	389	1,960	356	742	1,713	3,597	1,196	120	4,784	129	204	1,037
Quarries with dressing plants..	31	13	1,921	9,262	1,698	3,619	7,717	12,881	6,759	799	19,526	913	2,627	13,887
Vermont.....	22	8	1,559	7,038	1,431	3,095	6,282	10,647	4,897	574	15,499	619	1,963	9,750
Massachusetts.....	13	4	389	2,375	299	620	1,600	3,374	1,532	62	4,882	86	(NA)	(NA)
Middle Atlantic, total	84	13	970	3,958	875	1,716	3,399	5,602	2,956	340	8,546	352	1,091	6,002
Quarries only.....	46	3	270	864	243	431	739	1,514	350	154	1,890	128	(NA)	(NA)
Quarries with dressing plants..	38	10	700	3,094	632	1,285	2,660	4,088	2,606	186	6,656	224	(NA)	(NA)
New York, total.....	22	3	206	779	181	341	673	1,330	694	139	2,043	120	(NA)	(NA)
Quarries only.....	10	1	76	280	65	122	225	587	118	66	729	42	69	473
Quarries with dressing plants..	12	2	130	499	116	219	448	743	576	73	1,314	78	(NA)	(NA)
Pennsylvania, total..	62	10	764	3,179	694	1,375	2,726	4,272	2,262	201	6,503	232	821	4,237
Quarries only.....	36	2	194	584	178	309	514	927	232	88	1,161	86	196	1,088
Quarries with dressing plants..	26	8	570	2,595	516	1,066	2,212	3,345	2,030	113	5,342	146	625	3,149
East North Central, total.....	111	22	2,403	11,574	2,102	4,198	9,592	16,732	6,783	685	23,246	954	2,573	15,947
Quarries only.....	60	5	380	1,721	314	626	1,333	3,044	836	39	3,767	152	(NA)	(NA)
Quarries with dressing plants..	51	17	2,023	9,853	1,788	3,572	8,259	13,688	5,947	646	19,479	802	(NA)	(NA)
Ohio.....	14	3	569	2,634	483	966	2,097	3,906	1,026	43	4,857	118	331	1,726
Indiana, total.....	31	11	1,370	6,751	1,203	2,429	5,639	9,654	3,896	490	13,444	596	1,767	11,399
Quarries only.....	16	3	195	1,036	156	337	803	2,005	332	8	2,259	86	398	2,951
Quarries with dressing plants..	15	8	1,175	5,715	1,047	2,092	4,836	7,649	3,564	482	11,185	510	1,369	8,448
Wisconsin, total.....	50	7	382	1,915	332	671	1,615	2,860	1,657	141	4,449	209	399	2,419
Quarries only.....	25	2	108	367	99	187	333	689	352	31	1,033	39	93	524
Quarries with dressing plants..	25	5	274	1,548	233	484	1,282	2,171	1,305	110	3,416	170	306	1,895
West North Central, total.....	50	10	1,233	5,607	1,031	2,258	4,222	9,986	4,665	378	14,587	442	1,692	10,850
Quarries only.....	30	1	178	646	166	327	573	1,365	582	29	1,921	55	(NA)	(NA)
Quarries with dressing plants..	20	9	1,055	4,961	865	1,931	3,649	8,621	4,083	349	12,666	387	(NA)	(NA)
Minnesota, total....	19	5	433	2,259	349	777	1,650	4,436	1,354	104	5,763	131	972	6,708
Quarries only.....	14	-	58	212	57	109	211	416	234	-	639	11	88	402
Quarries with dressing plants..	5	5	375	2,047	292	668	1,439	4,020	1,120	104	5,124	120	884	6,306
South Dakota (quarries only)....	3	-	43	178	42	85	175	456	174	7	629	8	29	419
South Atlantic, total..	67	21	1,833	6,435	1,633	3,156	5,491	9,407	5,313	653	14,618	755	1,978	8,302
Quarries only.....	32	4	276	824	258	511	754	1,351	565	73	1,902	87	429	1,809
Quarries with dressing plants..	35	17	1,557	5,611	1,375	2,645	4,737	8,056	4,748	580	12,716	668	1,549	6,493
Virginia.....	8	2	190	623	161	330	512	1,239	378	175	1,606	186	(NA)	(NA)
North Carolina.....	11	3	402	1,360	362	642	1,134	1,676	900	97	2,571	102	495	2,182
Georgia, total.....	38	15	1,154	4,174	1,030	2,024	3,600	5,908	3,855	332	9,679	416	1,106	4,751
Quarries only.....	15	3	140	392	134	244	381	574	346	32	910	42	266	1,147
Quarries with dressing plants..	23	12	1,014	3,782	896	1,780	3,219	5,334	3,509	300	8,769	374	840	3,604
East South Central, total.....	37	9	999	2,999	883	1,665	2,636	3,982	2,152	680	6,044	770	1,277	6,076
Quarries only.....	26	3	242	569	227	381	528	1,025	221	42	1,238	50	304	1,306
Quarries with dressing plants..	11	6	757	2,430	656	1,284	2,108	2,957	1,931	638	4,806	720	973	4,770
Tennessee.....	28	7	757	2,030	671	1,217	1,767	2,455	1,715	172	4,140	202	997	4,172
West South Central, total.....	42	8	498	1,876	405	866	1,625	3,279	2,456	93	5,627	201	518	2,678
Quarries only.....	29	4	210	717	198	435	685	1,317	821	47	2,037	148	188	963
Quarries with dressing plants..	13	4	288	1,159	207	431	940	1,962	1,635	46	3,590	53	330	1,715
Arkansas.....	12	3	95	228	88	152	216	362	188	25	537	38	142	465
Oklahoma.....	13	-	49	145	46	74	137	660	134	8	773	29	97	447
Texas, total.....	17	5	354	1,503	271	640	1,272	2,257	2,134	60	4,317	134	279	1,785
Quarries only.....	11	2	110	477	104	282	451	588	663	19	1,181	89	100	556
Quarries with dressing plants..	6	3	244	1,026	167	358	821	1,669	1,471	41	3,136	45	179	1,229

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR DIMENSION STONE QUARRIES BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry, geographic area, and type of operation	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for prepa- ration, pur- chased energy, and contract work	Cost of pur- chased machin- ery in stalled	Value of shipments and receipts	Capital expendi- tures	All em- ployees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
ALL DIMENSION STONE QUARRIES—Continued														
Mountain, total.....	37	2	197	668	170	290	569	1,047	410	58	1,437	78	116	694
Quarries only.....	21	1	97	223	89	135	207	369	140	11	491	29	(NA)	(NA)
Quarries with dressing plants...	16	1	100	445	81	155	362	678	270	47	946	49	(NA)	(NA)
Arizona.....	9	-	75	206	64	103	177	351	211	28	555	35	(NA)	(NA)
Pacific, total.....	70	4	356	1,664	309	574	1,415	2,737	2,319	158	5,003	211	174	1,658
Quarries only.....	54	-	139	516	123	218	463	1,161	531	115	1,667	140	68	785
Quarries with dressing plants...	16	4	217	1,148	186	356	952	1,576	1,788	43	3,336	71	106	873
California, total....	49	3	277	1,359	246	474	1,150	2,294	2,202	101	4,446	151	119	1,127
Quarries only.....	39	-	101	402	91	167	360	956	468	62	1,400	86	51	604
Quarries with dressing plants...	10	3	176	957	155	307	790	1,338	1,734	39	3,046	65	68	523
DIMENSION LIMESTONE QUARRIES														
United States, total.....	110	22	2,184	10,464	1,854	3,766	8,682	15,196	6,766	877	21,721	1,118	2,631	16,386
Quarries only....	61	5	351	1,462	287	562	1,111	2,906	707	118	3,513	218	583	3,741
Quarries with dressing plants.	49	17	1,833	9,002	1,567	3,204	7,571	12,290	6,059	759	18,208	900	2,048	12,645
East North Central, total.....	54	14	1,526	7,856	1,325	2,709	6,518	10,974	5,065	570	15,891	718	1,940	12,508
Quarries only.....	23	3	182	975	142	307	727	1,882	397	18	2,214	83	377	2,754
Quarries with dressing plants...	31	11	1,344	6,881	1,183	2,402	5,791	9,092	4,668	552	13,677	635	1,563	9,754
Indiana, total.....	23	11	1,302	6,503	1,144	2,323	5,422	9,236	3,754	461	12,901	550	1,669	10,659
Quarries only.....	12	3	163	912	126	282	683	1,815	277	8	2,029	71	343	2,506
Quarries with dressing plants...	11	8	1,139	5,591	1,018	2,041	4,739	7,421	3,477	453	10,872	479	1,326	8,153
Wisconsin.....	26	3	202	1,266	163	354	1,034	1,699	1,210	107	2,858	158	248	1,705
West North Central.....	19	5	311	1,447	265	544	1,095	1,783	937	81	2,679	122	309	1,602
Quarries with dressing plants...	10	4	254	1,284	217	455	987	1,558	801	60	2,327	92	253	1,453
South.....	23	2	284	976	210	421	909	1,980	676	182	2,621	217	317	1,787
West South Central...	14	1	136	378	78	143	359	850	365	45	1,202	58	(NA)	(NA)
Texas.....	5	1	125	358	68	131	340	780	333	42	1,105	50	(NA)	(NA)
DIMENSION GRANITE QUARRIES														
United States, total.....	136	41	3,257	14,985	2,828	5,725	12,053	24,589	13,776	899	38,123	1,141	3,897	24,315
Quarries only....	66	10	824	3,601	774	1,635	3,277	6,458	3,027	156	9,388	253	740	4,085
Quarries with dressing plants.	70	31	2,433	11,384	2,054	4,090	8,776	18,131	10,749	743	28,735	888	3,157	20,230
New England, total....	28	11	1,013	5,548	869	1,771	4,368	8,430	3,712	369	12,072	439	1,225	8,801
Quarries only.....	13	4	361	1,873	329	687	1,627	3,434	1,152	71	4,580	77	156	918
Quarries with dressing plants...	15	7	652	3,675	540	1,084	2,741	4,996	2,560	298	7,492	362	1,069	7,883
Maine.....	3	3	186	846	174	333	784	775	349	6	1,095	35	(NA)	(NA)
Middle Atlantic.....	8	1	74	377	62	119	288	500	375	33	874	34	33	288
Quarries with dressing plants...	5	1	62	345	51	98	258	496	351	22	835	34	(NA)	(NA)
Pennsylvania.....	5	1	62	339	52	99	257	437	334	27	770	28	(NA)	(NA)
North Central, total...	30	7	575	2,684	476	1,040	2,043	5,949	1,677	166	7,608	184	1,135	7,765
Quarries only.....	22	1	153	603	145	290	570	1,201	617	28	1,809	37	(NA)	(NA)
Quarries with dressing plants...	8	6	422	2,081	331	750	1,473	4,748	1,060	138	5,799	147	(NA)	(NA)
South Dakota (quarries only).....	3	-	43	178	42	85	175	456	174	7	629	8	(NA)	(NA)
South Atlantic, total..	43	15	1,105	3,892	991	1,837	3,292	5,950	4,198	228	10,100	276	1,123	5,040
Quarries only.....	18	3	160	457	155	288	446	724	403	14	1,108	33	324	1,408
Quarries with dressing plants...	25	12	945	3,435	836	1,549	2,846	5,226	3,795	214	8,992	243	799	3,632
Georgia (quarries only).....	10	3	127	361	123	225	353	511	320	14	816	29	636	2,868
West South Central, total.....	10	4	248	1,226	222	544	1,009	1,963	1,871	20	3,755	99	288	1,717
Quarries only.....	5	2	104	476	102	281	459	897	680	3	1,501	79	51	280
Quarries with dressing plants...	5	2	144	750	120	263	550	1,066	1,191	17	2,254	20	237	1,437
Oklahoma.....	5	-	42	134	40	68	127	615	106	4	701	24	(NA)	(NA)
Texas.....	5	4	206	1,092	182	476	882	1,348	1,765	16	3,054	75	(NA)	(NA)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 2.—GENERAL STATISTICS FOR DIMENSION STONE QUARRIES BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry, geographic area, and type of operation	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for prep- aration, pur- chased energy, and contract work	Cost of pur- chased machin- ery in- stalled	Value of shipments and receipts	Capital expendi- tures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
DIMENSION GRANITE QUARRIES—Continued														
West.....	17	3	242	1,258	208	414	1,053	1,797	1,943	83	3,714	109	93	704
Quarries with dressing plants...	12	3	208	1,098	176	346	908	1,599	1,792	54	3,363	82	72	492
Pacific.....	13	3	215	1,121	185	373	936	1,542	1,876	69	3,392	95	(NA)	(NA)
Quarries with dressing plants...	9	3	184	978	156	311	808	1,361	1,736	40	3,069	68	(NA)	(NA)
California.....	10	3	203	1,086	180	363	904	1,490	1,858	67	3,324	91	(NA)	(NA)
DIMENSION STONE, N.E.C.														
United States, total.....	304	43	5,358	20,554	4,780	9,593	17,644	29,465	14,467	2,188	43,574	2,546	5,722	26,430
Quarries only....	192	10	1,006	2,977	913	1,609	2,607	5,379	1,508	356	6,796	447	983	5,250
Quarries with dressing plants...	112	33	4,352	17,577	3,867	7,984	15,037	24,086	12,959	1,832	36,778	2,099	4,739	21,180
New England.....	24	6	1,297	5,674	1,185	2,590	5,062	8,048	4,243	550	12,238	603	1,606	6,123
Quarries with dressing plants...	16	6	1,269	5,587	1,158	2,535	4,976	7,885	4,199	501	12,034	551	1,558	6,004
Middle Atlantic, total.	70	11	860	3,466	782	1,540	3,013	4,826	2,527	273	7,346	280	1,016	5,421
Quarries only.....	37	2	222	717	201	353	611	1,234	272	109	1,525	90	216	1,221
Quarries with dressing plants...	33	9	638	2,749	581	1,187	2,402	3,592	2,255	164	5,821	190	800	4,200
New York.....	16	2	162	636	144	272	554	1,018	604	99	1,642	79	241	1,457
Quarries with dressing plants...	10	2	121	465	109	205	421	688	538	67	1,221	72	183	1,086
Pennsylvania, total..	54	9	698	2,830	638	1,268	2,459	3,808	1,923	174	5,704	201	775	3,964
Quarries only.....	31	2	181	546	166	286	478	904	206	77	1,104	83	158	850
Quarries with dressing plants...	23	7	517	2,284	472	982	1,981	2,904	1,717	97	4,600	118	617	3,114
East North Central, total.....	58	6	1,224	5,194	1,067	2,163	4,158	8,012	3,769	246	11,655	372	881	4,922
Quarries only.....	36	1	166	626	145	267	501	1,101	268	1	1,313	57	(NA)	(NA)
Quarries with dressing plants...	22	5	1,058	4,568	922	1,896	3,657	6,911	3,501	245	10,342	315	(NA)	(NA)
Indiana.....	8	-	68	248	59	106	217	418	142	29	543	46	98	740
South.....	70	17	1,693	5,216	1,498	2,885	4,542	6,775	3,176	996	9,813	1,134	2,045	8,512
West South Central...	18	3	114	272	105	179	257	466	220	28	670	44	119	417
Mountain.....	31	2	165	512	143	241	436	761	335	43	1,078	61	97	586
Arizona.....	9	-	75	206	64	103	177	351	211	28	555	35	(NA)	(NA)
Pacific.....	51	1	119	492	105	174	433	1,043	417	80	1,444	96	77	866
Quarries only.....	44	-	86	322	75	129	289	828	365	77	1,177	93	(NA)	(NA)
California.....	34	-	52	222	47	84	200	657	319	25	960	41	(NA)	(NA)

- Represents zero.

(NA) Not available.

Table 3A.—PRIMARY PRODUCTS OF DIMENSION STONE QUARRIES SHIPPED BY ALL QUARRIES AND BY ASSOCIATED DRESSING PLANTS,
BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	Total shipments including interplant transfers			
	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
UNITED STATES				
All dimension stone (net shipments), total ¹	3,433	91,005	2,957	80,559
Rough dimension stone:				
Net shipments ¹	2,209	22,789	1,662	18,613
Gross shipments.....	2,368	25,708	1,780	22,154
Dressed dimension stone.....	1,224	68,216	1,295	61,946
Limestone (net shipments), total ¹	1,519	20,039	1,129	18,331
Rough dimension stone:				
Net shipments ¹	1,071	6,000	705	7,009
Gross shipments.....	1,095	6,315	718	7,139
Dressed dimension stone.....	448	14,039	424	11,322
Granite (net shipments), total ¹	851	33,658	807	29,827
Rough dimension stone:				
Net shipments ¹	471	8,782	333	3,711
Gross shipments.....	585	9,841	410	5,864
Dressed dimension stone.....	380	24,876	474	26,116
Miscellaneous stone (slate, marble, sandstone, trap rock, and miscellaneous stone), net shipments, total ¹	1,063	37,308	1,021	32,401
Rough dimension stone:				
Net shipments ¹	667	8,007	624	7,893
Gross shipments.....	688	9,552	652	9,151
Dressed dimension stone.....	396	29,301	397	24,508
NEW ENGLAND				
All dimension stone (net shipments), total ¹	403	20,468	530	18,040
Rough dimension stone (net shipments) ¹	193	4,006	169	1,192
Dressed dimension stone.....	210	16,462	361	16,848
Granite (net shipments), total ¹	288	11,718	423	11,123
Rough dimension stone (net shipments) ¹	171	3,897	149	1,074
Dressed dimension stone.....	117	7,821	274	10,049
Limestone and other stone (net shipments), total ¹	115	8,750	107	6,917
Rough dimension stone (net shipments) ¹	22	109	20	118
Dressed dimension stone.....	93	8,641	87	6,799
Vermont				
All dimension stone (net shipments) ¹	236	12,247	337	11,114
Massachusetts				
All dimension stone (net shipments) ¹	117	4,333	138	4,287
MIDDLE ATLANTIC				
All dimension stone (net shipments) ¹	338	7,418	436	7,165
Rough dimension stone (net shipments) ¹	223	2,288	308	2,793
Dressed dimension stone.....	115	5,130	128	4,372
New York				
All dimension stone (net shipments) ¹	71	1,499	108	2,109
Pennsylvania				
All dimension stone (net shipments) ¹	267	5,919	303	4,975
Rough dimension stone (net shipments) ¹	168	1,513	194	1,372
Dressed dimension stone.....	99	4,406	109	3,603
EAST NORTH CENTRAL				
All dimension stone (net shipments) ¹	1,099	20,810	990	19,852
Rough dimension stone (net shipments) ¹	661	5,963	566	7,174
Dressed dimension stone.....	438	14,847	424	12,678
Limestone (net shipments) ¹	870	13,686	767	13,403
Rough dimension stone (net shipments) ¹	522	3,969	435	5,182
Dressed dimension stone.....	348	9,717	332	8,221
Granite and other stone (net shipments) ¹	229	7,124	223	6,449
Rough dimension stone (net shipments) ¹	139	1,994	131	1,992
Dressed dimension stone.....	90	5,130	92	4,457
Ohio				
All dimension stone (net shipments) ¹	118	4,026	115	3,588
Indiana				
All dimension stone (net shipments) ¹	783	11,947	743	13,427
Rough dimension stone (net shipments) ¹	506	3,819	423	5,455
Dressed dimension stone.....	277	8,128	320	7,972
Wisconsin				
All dimension stone (net shipments) ¹	158	3,771	97	7,393

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 3A.—PRIMARY PRODUCTS OF DIMENSION STONE QUARRIES SHIPPED BY ALL QUARRIES AND BY ASSOCIATED DRESSING PLANTS,
BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	Total shipments including interplant transfers			
	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
WEST NORTH CENTRAL				
All dimension stone (net shipments) ¹	223	12,287	190	12,911
Limestone (net shipments) ¹	120	2,492	126	2,051
Granite (net shipments) ¹	62	6,155	44	8,417
Other (net shipments) ¹	41	3,640	20	2,443
Minnesota				
All dimension stone (net shipments) ¹	78	5,407	71	7,793
South Dakota				
All dimension stone (net shipments) ¹	38	1,986	15	1,799
SOUTH ATLANTIC				
All dimension stone (net shipments) ¹	397	12,367	370	9,786
Rough dimension stone (net shipments) ¹	178	3,122	198	2,872
Dressed dimension stone.....	219	9,245	172	6,914
Granite (net shipments) ¹	226	7,782	245	5,911
Limestone and other stone (net shipments) ¹	171	4,585	125	3,875
Virginia				
All dimension stone (net shipments) ¹	34	1,004	(NA)	(NA)
North Carolina				
All dimension stone (net shipments) ¹	32	2,162	89	2,185
Georgia				
All dimension stone (net shipments) ¹	258	7,792	223	6,352
EAST SOUTH CENTRAL				
All dimension stone (net shipments) ¹	126	6,147	164	6,710
Rough dimension stone (net shipments) ¹	74	1,291	125	2,120
Dressed dimension stone.....	52	4,856	39	4,590
Tennessee				
All dimension stone (net shipments) ¹	81	3,442	125	5,155
WEST SOUTH CENTRAL				
All dimension stone (net shipments) ¹	582	5,339	123	3,257
Granite (net shipments) ¹	171	3,293	37	2,173
Limestone and other stone (net shipments) ¹	411	2,046	86	1,084
Texas				
All dimension stone (net shipments) ¹	529	4,009	66	2,183
MOUNTAIN				
All dimension stone (net shipments) ¹	60	1,398	70	900
PACIFIC				
All dimension stone (net shipments) ¹	205	4,771	84	1,938
California				
All dimension stone (net shipments) ¹	132	4,001	53	1,424

¹Represents gross shipments, including interplant transfers, less rough stone received from other establishments for dressing at dressing plants operated in conjunction with a quarry.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR DIMENSION STONE SHIPPED BY ALL QUARRIES AND BY ASSOCIATED DRESSING PLANTS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
All dimension stone (net shipments).....1963...	122	101
.....1958...	120	93
Limestone.....1963...	121	84
.....1958...	98	94
Granite.....1963...	140	87
.....1958...	156	74
Miscellaneous stone.....1963...	111	127
.....1958...	109	112
Rough dimension stone (gross shipments).....1963...	107	85
.....1958...	88	89
Limestone.....1963...	125	70
.....1958...	82	120
Granite.....1963...	109	87
.....1958...	76	74
Miscellaneous stone.....1963...	109	82
.....1958...	103	83
Dressed dimension stone.....1963...	129	113
.....1958...	139	95
Limestone.....1963...	119	93
.....1958...	112	79
Granite.....1963...	167	87
.....1958...	209	73
Miscellaneous stone.....1963...	112	155
.....1958...	112	129

PUBLICATION PROGRAM 1963 CENSUSES OF MANUFACTURES AND MINERAL INDUSTRIES

Results of the 1963 Censuses of Manufactures and Mineral Industries will be issued initially in preliminary reports which will furnish summary data. These reports will be superseded by more detailed final reports. An outline of the publication program is shown below.

PRELIMINARY REPORTS

Summary Series

Manufactures (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. General statistics will also be presented for industries grouped according to market categories—durable and nondurable goods industries. A second report will provide general statistics without industry detail for regions, States, and large standard metropolitan statistical areas.

Mineral Industries (2 reports). One report will present general statistics at the U.S. level for each 4-digit industry and 2- and 3-digit industry group. A second report will provide general statistics by 2-digit industry group for regions and States.

Industry Series

Manufactures (about 370 reports). Separate reports for virtually all of the 430 manufacturing industries will give industry totals for general statistics for the United States and for regions and States. A product table in each report will give the quantity and value of shipments of the products classified in the industry for the United States.

Mineral Industries (about 45 reports). Separate reports for industries or for groups of industries for all of the 50 mineral industries will present general statistics for the United States and for regions and States. A product table will give the quantity and value of shipments of the products classified in the industry for the United States and for regions and States.

Area Series

Manufactures (51 reports). A separate report for each State and the District of Columbia will present general statistics for the State and for the larger standard metropolitan statistical areas within the State by 2-digit and selected 3-digit industries, and for most individual counties on an "all manufacturing" basis.

Subject Series

Manufactures (2 reports). One report will provide data on the number of establishments, employment, and

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value added by manufacturing for each 4-digit industry according to employment size of the establishment in each industry. A separate report will provide statistics on inventories for each 4-digit industry on a national basis; State data on inventories will also be provided.

Mineral Industries (one report). This report will provide number of establishments, employment, and value added in mining for each 4-digit industry according to employment size of the establishment in each industry.

FINAL REPORTS

All preliminary reports will be superseded by comparable final reports. After separate final reports have been issued, they will be assembled and reissued in cloth bindings as follows:

Manufactures

Volume I, Summary Statistics

Volume II, Industry Statistics
Part 1, Major Groups 20-28
Part 2, Major Groups 29-39

Volume III, Area Statistics

Mineral Industries

Volume I, General Summary and Industry Statistics

Volume II, Area Statistics

1963 CENSUS OF MANUFACTURES IN PUERTO RICO

A separate 1963 Census of Manufactures was conducted jointly by the Puerto Rico Planning Board, Government of the Commonwealth of Puerto Rico, and the U.S. Bureau of the Census. A report of the findings will include statistics of manufacturing activity by industry and geographic area on value added by manufacture, employment, payrolls, inventories, capital expenditures, etc.

Additional Information and Order Forms

A more detailed description of the publication program of the 1963 censuses, including tentative publication dates, is available free of charge. Separate announcement and order forms for the preliminary reports of the censuses of manufactures and mineral industries are also available free of charge. Requests for order forms should specify which report series is desired. All requests should be addressed to the Publications Distribution Section, Bureau of the Census, Washington, D.C., 20233.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14B-2

INDUSTRY SERIES

preliminary
report

Crushed and broken stone

SIC Code 1421

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Crushed and Broken Stone Industry shipped products valued at \$796 million, an increase of 28 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an increase of 4 percent from 1958 to a total of 43 thousand employees in 1963. Value

Table 1A.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958 ¹			1954			1939 ²		
		Total	Crushed and broken stone industry	Crushed stone quarries in manufactures	Total	Crushed and broken stone industry	Crushed stone quarries in manufactures	Total	Crushed and broken stone industry	Crushed stone quarries in manufactures	Total	Crushed and broken stone industry	Crushed stone quarries in manufactures
Establishments:													
Total.....	Number...	2,580	2,258	322	2,190	1,970	220	2,174	1,919	255	³ 1,536	³ 1,260	³ 276
With 20 employees or more....	...do....	770	670	100	748	651	97	658	531	127	(NA)	(NA)	(NA)
All employees:													
Number.....	Number...	49,274	43,398	⁴ 5,876	46,711	41,730	⁴ 4,981	43,927	37,640	⁴ 6,287	33,707	26,575	7,132
Payroll.....	\$1,000...	261,557	230,060	⁴ 31,497	212,942	189,801	⁴ 23,141	169,483	146,067	⁴ 23,416	37,655	29,213	8,442
Production, development, and exploration workers:													
Number.....	Number...	42,179	36,303	⁴ 5,876	40,129	35,148	⁴ 4,981	39,619	33,332	⁴ 6,287	30,937	24,110	6,827
Man-hours.....	Thousand...	92,686	80,935	11,751	86,174	76,212	9,962	88,576	75,999	12,577	62,366	(NA)	(NA)
Wages.....	\$1,000...	209,833	178,336	31,497	171,549	148,408	23,141	146,663	123,247	23,416	31,492	23,653	7,839
Value added in mining.....	...do....	698,130	581,179	116,951	566,066	449,419	116,647	436,565	339,530	97,035	75,886	59,358	16,528
Cost of supplies, stone received for preparation, purchased fuel and electric energy, and contract work....	...do....	268,678	237,505	⁵ 31,173	210,866	188,780	⁵ 22,086	150,254	128,442	⁵ 21,812	⁵ 25,695	⁵ 20,248	⁵ 5,447
Stone received for preparation only.....	...do....	(NA)	7,848	(NA)	(NA)	2,185	(NA)	(NA)	⁶ 2,438	(NA)	(NA)	(NA)	(NA)
Contract work only.....	...do....	(NA)	23,457	(NA)	(NA)	² 16,241	(NA)	(NA)	⁶ 10,695	(NA)	787	(NA)	(NA)
Cost of purchased machinery installed.....	...do....	(NA)	59,855	(NA)	(NA)	51,828	(NA)	(NA)	44,971	(NA)	(NA)	(NA)	(NA)
Value of shipments and receipts.....	...do....	944,199	796,075	⁷ 148,124	759,414	620,681	⁷ 138,733	586,588	467,741	⁷ 118,847	(NA)	(NA)	(NA)
Value of net shipments and receipts.....	...do....	926,718	778,594	⁷ 148,124	745,643	606,910	⁷ 138,733	579,853	461,006	⁷ 118,847	101,581	79,606	21,975
Capital expenditures.....	...do....	(NA)	82,464	(NA)	(NA)	69,346	(NA)	(NA)	45,202	(NA)	(NA)	(NA)	(NA)
Horsepower rating of power equipment.....	1,000 hp.	(NA)	3,611	(NA)	(NA)	(NA)	(NA)	(NA)	⁶ 2,794	(NA)	961	(NA)	(NA)

(NA) Not available.

¹Except for number of establishments, figures for the Crushed and Broken Stone Industry exclude data for one establishment in Alaska with employees in the range 0-4, and figures for crushed stone quarries in manufactures exclude data for one quarry in Hawaii with employees in the range 5-9.

²Excludes data for Alaska and Hawaii.

³Represents number of quarries.

⁴Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.

⁵Excludes cost of stone received for preparation.

⁶Excludes data for 10 establishments primarily engaged in producing "Quartz."

⁷Includes the estimated value of stone produced and used in the same establishment in making cement, lime, ready-mixed concrete, and other manufactured products.

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added in mining amounted to \$581 million in 1963, an increase of 29 percent from 1958.

The above figures exclude data for quarries operated as parts of cement, lime, and other manufacturing establishments. Selected information was obtained on such quarries and is shown in tables 1A, 1B, 1C, 2, and 3A. It is estimated that the value of stone quarried and used in the same establishment or shipped by such establishments was about \$148 million in 1963, an increase of 8 percent from 1958. Also excluded are quarries operated by Federal, State, and local governments; these are not included in the scope of the census.

The Crushed and Broken Stone Industry represents establishments engaged primarily in mining or quarrying crushed and broken stone. Quarries operated in conjunction with cement and lime plants are included in this industry when separate reports are available; but the stone crushing operations performed at the plant are not included. Nepheline syenite operations are classified in Industry 1459. Establishments primarily engaged in mining or preparing bituminous limestone and sandstone are classified in Industry 1494, Native Asphalt and Bitumens. The crushed and broken stone subindustries are:

Crushed and Broken Limestone Subindustry.—This subindustry represents establishments primarily engaged in mining or quarrying crushed and broken limestone, including related rocks, such as dolomite, cement rock, marl, travertine, and calcareous tufa.

Crushed and Broken Granite Subindustry.—This subindustry represents establishments primarily engaged in mining or quarrying crushed and broken granite, including related rocks, such as gneiss, syenite, and diorite.

Crushed and Broken Stone, N.E.C., Subindustry.—This subindustry represents establishments primarily engaged in mining or quarrying crushed and broken stone, not elsewhere classified, such as slate (including slate granules), marble, trap rock (basalt, diabase, gabbro, and related rocks), sandstone (including quartzite and ganister), and various light-colored volcanic rocks, mica schist, and mixed boulders.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly

different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represent the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Crushed and Broken Stone Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of the Crushed and Broken Stone Industry in 1963 amounted to \$796 million. Of this total, \$52 million represented products primary to other industries and miscellaneous receipts.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures, appearing in table 3A, indicate that the value of net shipments of crushed and broken stone shipped by all quarries was \$792 million. Of this total, \$744 million, or 94 percent,

represented shipments by quarries classified in Industry 1421, while the remainder was shipped by quarries classified in other industries.

In addition to shipments of crushed and broken stone, large tonnages were quarried and used in the same establishment in making cement, lime, concrete, and paving mixtures. Stone so used in 1963 amounted to 93 million tons, an increase of 18 percent from 1958. This 1963 tonnage amounted to approximately 15 percent of the total tonnage of stone produced by quarries at the mining and manufacturing establishments covered in this report.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in tables 1A, 1B, 1C, and 1D. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Value of shipments of products purchased for resale without further processing is also subtracted for "net" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Crushed and Broken Stone Industry in 1963 was \$796 million, and the value of net shipments and receipts was \$779 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available.

The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1A, 1B, 1C, 1D, and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1A, 1B, 1C, 1D, and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports are being issued for other industries. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is also being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census Washington, D. C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

Table 1B.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN LIMESTONE SUBINDUSTRY AND FOR CRUSHED LIMESTONE QUARRIES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954			1939 ¹		
		Total	Crushed and broken limestone subindustry	Crushed limestone quarries in manufactures	Total	Crushed and broken limestone subindustry	Crushed limestone quarries in manufactures ²	Total	Crushed and broken limestone subindustry ³	Crushed limestone quarries in manufactures ²	Total	Crushed and broken limestone subindustry	Crushed limestone quarries in manufactures
Establishments:													
Total.....	Number...	1,870	1,614	256	1,662	1,463	199	1,692	1,449	243	1,194	4918	4,276
With 20 employees or more.....	do.....	590	496	94	584	487	97	514	388	126	(NA)	(NA)	(NA)
All employees:													
Number.....	Number...	36,250	31,290	⁵ 4,960	36,407	31,507	⁵ 4,900	34,404	28,240	⁵ 6,164	26,513	19,381	7,132
Payroll.....	\$1,000...	188,936	161,708	⁵ 27,228	166,570	143,705	⁵ 22,865	130,690	107,818	⁵ 22,872	29,356	20,944	8,442
Production, development, and exploration workers:													
Number.....	Number...	31,402	26,442	⁵ 4,960	31,353	26,453	⁵ 4,900	31,089	24,925	⁵ 6,164	24,482	17,655	6,827
Man-hours.....	Thousand...	69,390	59,471	9,919	67,062	57,262	9,800	68,664	56,335	12,329	48,901	(NA)	(NA)
Wages.....	\$1,000...	154,552	127,324	27,228	134,416	111,551	22,865	113,587	90,715	22,872	24,903	17,564	7,339
Value added in mining.....	do.....	514,677	409,241	105,436	450,171	334,803	115,368	334,862	239,604	95,258	57,960	41,432	16,528
Cost of supplies, stone received for preparation, purchased fuel and electric energy, and contract work.....	do.....	180,549	153,740	26,809	162,231	140,280	21,951	109,794	88,504	21,290	61,137	613,740	65,447
Stone received for preparation only.....	do.....	(NA)	6,219	(NA)	(NA)	2,056	(NA)	(NA)	1,895	(NA)	(NA)	(NA)	(NA)
Contract work only.....	do.....	(NA)	16,310	(NA)	(NA)	712,555	(NA)	(NA)	7,336	(NA)	(NA)	507	(NA)
Cost of purchased machinery installed.....	do.....	(NA)	40,795	(NA)	(NA)	39,088	(NA)	(NA)	32,622	(NA)	(NA)	(NA)	(NA)
Value of shipments and receipts.....	do.....	676,450	544,205	⁸ 132,245	596,962	459,643	⁸ 137,319	445,305	328,757	⁸ 116,548	(NA)	(NA)	(NA)
Value of net shipments and receipts.....	do.....	663,434	531,189	⁸ 132,245	584,785	447,466	⁸ 137,319	440,251	323,703	⁸ 116,548	77,147	55,272	21,975
Capital expenditures.....	do.....	(NA)	59,571	(NA)	(NA)	54,528	(NA)	(NA)	31,973	(NA)	(NA)	(NA)	(NA)
Horsepower rating of power equipment.....	1,000 hp.	(NA)	2,593	(NA)	(NA)	(NA)	(NA)	(NA)	2,183	(NA)	756	(NA)	(NA)

(NA) Not available.

¹Excludes data for Alaska and Hawaii.²Except for number of establishments, excludes data for one quarry in Hawaii.³Except for number of establishments, excludes data for 2 establishments in Hawaii.⁴Represents number of quarries.⁵Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained for employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.⁶Excludes cost of stone received for preparation.⁷Excludes data for Hawaii.⁸Includes the estimated value of stone produced and used in the same establishment in making cement, lime, ready-mixed concrete, and other manufactured products.

Table 1C.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN GRANITE SUBINDUSTRY AND FOR CRUSHED AND BROKEN GRANITE QUARRIES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963 ¹	1958 ²	1954 ³	1939 ³
Establishments:					
Total.....	Number.....	154	122	104	479
With 20 employees or more.....	do.....	65	61	40	(NA)
All employees:					
Number.....	Number.....	4,032	2,330	2,574	2,030
Payroll.....	\$1,000.....	19,916	12,475	8,985	2,326
Production, development, and exploration workers:					
Number.....	Number.....	3,471	2,906	2,367	1,340
Man-hours.....	Thousand.....	7,938	6,442	5,658	4,300
Wages.....	\$1,000.....	16,098	11,771	7,677	1,772
Value added in mining.....	do.....	62,013	33,493	22,783	1,342
Cost of supplies, stone received for preparation, purchased fuel and electric energy, and contract work.....	do.....	28,800	14,408	9,363	1,342
Contract work only.....	do.....	2,182	1,334	500	20
Cost of purchased machinery installed.....	do.....	56,476	5,838	5,000	1,061
Value of shipments and receipts.....	do.....	90,208	49,596	31,238	17,500
Capital expenditures.....	do.....	57,185	4,703	53,100	(NA)
Horsepower rating of power equipment.....	1,000 hp.....	322	NA ⁴	320	40

(NA) Not available.

¹Except as specified, includes data for quarries operated as parts of manufacturing plants. For 1963 includes 4 such quarries, and for 1954 includes 3. See table 2 for separate 1963 figures for the Crushed and Broken Granite Subindustry.²Excludes data for one granite quarry operated as part of a manufacturing plant, and, except for number of establishments, excludes data for one quarry in Alaska.³Excludes data for Alaska and Hawaii.⁴Represents number of quarries.⁵Excludes data for quarries operated as parts of manufacturing plants.⁶Represents value of net production and receipts.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 1D.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE, N.E.C., SUBINDUSTRY AND FOR CRUSHED STONE, N.E.C., QUARRIES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954			1939 ¹
		Total	Crushed and broken stone, n.e.c., subindustry	Crushed stone, n.e.c., quarries in manufactures	Total	Crushed and broken stone, n.e.c., subindustry	Crushed stone, n.e.c., quarries in manufactures ¹⁰	Total	Crushed and broken stone, n.e.c., subindustry ²	Crushed stone, n.e.c., quarries in manufactures	
Establishments:											
Total.....	Number...	556	494	62	406	385	21	378	369	9	³ 263
With 20 employees or more.....	...do....	115	109	6	103	103	-	104	103	1	(NA)
All employees:											
Number.....	Number...	8,942	8,048	⁴ 894	6,995	6,914	⁴ 81	6,911	6,812	⁴ 99	4,862
Payroll.....	\$1,000...	52,705	48,526	⁴ 4,179	33,397	33,121	⁴ 276	29,676	29,238	⁴ 438	5,944
Production, development, and exploration workers:											
Number.....	Number...	7,306	6,412	⁴ 894	5,870	5,789	⁴ 81	6,129	6,030	⁴ 99	4,355
Man-hours.....	Thousand...	15,358	13,570	1,788	12,670	12,508	162	14,178	13,978	200	8,891
Wages.....	\$1,000...	39,182	35,003	⁴ 4,179	26,362	26,086	276	25,293	24,855	438	4,807
Value added in mining.....	...do....	121,438	110,241	11,197	82,402	81,123	1,279	79,056	77,461	1,595	12,884
Cost of supplies, stone received for preparation, purchased fuel and electric energy, and contract work.....	...do....	59,237	55,019	⁴ 4,218	33,667	33,532	135	31,400	31,051	349	⁵ 4,520
Contract work only.....	...do....	(NA)	4,965	(NA)	(NA)	⁶ 3,052	(NA)	(NA)	⁷ 2,638	(NA)	86
Cost of purchased machinery installed.....	...do....	(NA)	12,574	(NA)	(NA)	6,902	(NA)	(NA)	9,246	(NA)	(NA)
Value of shipments and receipts.....	...do....	177,541	162,126	⁸ 15,415	112,856	111,442	⁸ 1,414	109,708	107,764	⁸ 1,944	⁹ 17,404
Capital expenditures.....	...do....	(NA)	15,708	(NA)	(NA)	10,115	(NA)	(NA)	9,994	(NA)	(NA)
Horsepower rating of power equipment.....	1,000 hp.	(NA)	696	(NA)	(NA)	(NA)	(NA)	(NA)	⁷ 442	(NA)	157

- Represents zero. (NA) Not available.

¹Excludes data for Alaska and Hawaii.²Except for number of establishments, excludes data for one establishment with employment in the range 10-19.³Represents number of quarries.⁴Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.⁵Excludes cost of stone received for preparation.⁶Excludes data for Hawaii.⁷Excludes data for 10 establishments primarily engaged in producing "Quartz."⁸Includes the estimated value of stone produced and used in the same establishment in making cement, ready-mixed concrete, and other manufactured products.⁹Represents value of net production and receipts.¹⁰Includes data for one granite quarry.

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry or subindustry and geographic area	1963							1958				
	Establish- ments,number	All employees		Production, development, and exploration workers		Value added in mining (\$1,000)	Cost of supplies, minerals for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)
		Number	Payroll (\$1,000)	Number	Man- hours								Wages ($1,000)
Total	With 20 or more em- ploy- ees											
ALL CRUSHED AND BROKEN STONE QUARRIES												
Crushed and broken stone industry and crushed stone in manufactures, total.....	2,580	770	49,274	261,557	42,179	92,686	209,833	698,130	268,678	(NA)	146,711	1,566,066
Crushed and broken stone industry.....	2,258	670	43,398	230,060	36,303	80,935	178,336	581,179	237,505	59,855	141,730	1,449,419
Crushed stone quarries in manufactures.....	322	100	25,876	231,497	25,876	11,751	31,497	116,951	31,173	(NA)	124,981	1,116,647
New England, total.....	63	21	1,268	7,509	1,078	2,363	6,067	19,232	6,116	(NA)	1,210	14,872
Crushed and broken stone industry.....	40	16	885	5,460	695	1,595	4,018	10,911	996	1,394	1,094	11,022
Crushed stone quarries in manufactures.....	23	5	2383	2,049	2383	768	2,049	8,321	2,145	(NA)	216	3,850
Maine.....	7	3	2109	2506	2102	218	454	1,342	377	56	496	4606
Vermont (crushed and broken stone industry).....	7	1	95	495	81	196	351	1,027	492	216	158	1,686
Massachusetts, total.....	24	9	517	2,872	431	909	2,344	7,435	2,678	(NA)	450	6,640
Crushed and broken stone industry.....	13	7	393	2,258	307	662	1,730	4,575	1,308	547	400	4,464
Crushed stone quarries in manufactures.....	11	2	2124	2614	2124	247	614	2,860	1,370	(NA)	250	2,176
Connecticut, total.....	19	6	466	3,259	397	896	2,669	8,516	2,254	(NA)	(NA)	(NA)
Crushed and broken stone industry.....	13	5	276	2,135	207	515	1,545	4,073	1,823	5,701	397	3,971
Crushed stone quarries in manufactures.....	6	1	2190	21124	2190	381	1,124	4,443	431	(NA)	(NA)	(NA)
Middle Atlantic, total.....	334	120	8,595	53,274	6,917	15,329	39,189	127,941	51,231	(NA)	8,793	115,940
Crushed and broken stone industry.....	276	103	7,434	46,650	5,756	13,008	32,565	108,683	45,272	9,628	7,561	89,266
Crushed stone quarries in manufactures.....	58	17	21161	26,624	21,161	2,321	6,624	19,258	5,959	(NA)	2,232	26,674
New York, total.....	87	32	2,360	16,319	1,867	4,167	11,959	39,590	12,842	(NA)	2,311	35,918
Crushed and broken stone industry.....	67	28	2181	15,157	1,688	3,811	10,797	36,202	11,761	2,496	2,068	30,195
Crushed stone quarries in manufactures.....	20	4	2179	21162	2179	356	1,162	3,388	1,081	(NA)	243	5,723
New Jersey, total.....	36	21	1,766	12,494	1,288	3,118	7,910	27,184	11,728	(NA)	1,138	14,747
Crushed and broken stone industry.....	30	20	1,522	11,319	1,044	2,630	6,735	25,143	11,283	2,243	1,138	14,747
Crushed stone quarries in manufactures.....	6	1	2444	21,175	2244	488	1,175	2,041	445	(NA)	-	-
Pennsylvania, total.....	211	67	4,469	24,461	3,762	8,044	19,320	61,167	26,661	(NA)	5,344	65,275
Crushed and broken stone industry.....	179	55	3,731	20,174	3,024	6,567	15,033	47,338	22,228	7,353	4,555	44,324
Crushed stone quarries in manufactures.....	32	12	2738	24,287	2738	1,477	4,287	13,829	4,433	(NA)	2,989	20,951
East North Central, total.....	522	125	10,227	57,327	8,576	18,432	44,924	148,506	53,068	(NA)	10,994	134,929
Crushed and broken stone industry.....	465	110	9,289	52,151	7,638	16,558	39,748	129,722	47,388	13,168	10,066	114,249
Crushed stone quarries in manufactures.....	57	15	2938	25,176	2938	1,874	5,176	18,784	5,680	(NA)	2,928	20,680
Ohio, total.....	131	42	3,163	16,788	2,731	6,005	13,747	43,133	16,255	(NA)	4,022	43,126
Crushed and broken stone industry.....	104	34	2,664	14,011	2,232	5,007	10,970	35,109	13,390	5,173	3,485	30,323
Crushed stone quarries in manufactures.....	27	8	2,499	22,777	2,499	998	2,777	8,024	2,865	(NA)	2,537	12,803
Indiana, total.....	87	29	1,444	7,425	1,157	2,701	5,833	17,976	7,581	(NA)	(NA)	(NA)
Crushed and broken stone industry.....	82	27	1,371	6,998	1,084	2,557	5,406	16,735	6,897	24,707	1,169	12,989
Crushed stone quarries in manufactures.....	5	2	273	2,427	273	144	427	1,241	684	(NA)	(NA)	(NA)
Illinois, total.....	163	34	2,721	15,796	2,300	5,071	12,170	42,721	13,696	(NA)	2,796	45,358
Crushed and broken stone industry.....	150	32	2,477	14,510	2,056	4,983	10,884	38,445	12,351	4,484	2,669	41,725
Crushed stone quarries in manufactures.....	13	2	244	2,126	244	488	1,286	4,276	1,345	(NA)	217	3,633

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963										1958				
	Establish- ments,number	All employees		Production, development, and exploration workers			Cost of supplies, minerals received for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)			
		Total	With 20 or more em- ploy- ees	Number	Payroll (\$1,000)	Number							Man- hours	Wages (\$1,000)	Value added in mining (\$1,000)
ALL CRUSHED AND BROKEN STONE QUARRIES—Continued															
East North Central—Continued															
Michigan, total.....	52	9	1,472	9,331	1,228	2,253	6,924	28,483	33,439	(NA)	(NA)	(NA)			
Crushed and broken stone industry.....	44	6	1,363	8,690	1,119	2,035	6,283	23,336	27,538	1,629	1,615	18,444			
Crushed stone quarries in manufactures.....	8	3	109	2,641	210	218	641	5,147	5,881	(NA)	(NA)	(NA)			
Wisconsin.....	89	11	2,427	27,987	2,150	2,402	6,250	16,193	326,087	(NA)	(NA)	(NA)			
Crushed and broken stone industry.....	85	11	1,414	7,942	1,147	2,376	6,205	16,097	25,939	2,668	1,128	10,768			
West North Central, total.....	459	101	6,436	32,710	5,565	12,453	26,667	79,692	108,488	(NA)	6,085	72,894			
Crushed and broken stone industry.....	429	88	5,776	29,475	4,905	11,134	23,432	65,440	91,477	12,116	5,462	57,426			
Crushed stone quarries in manufactures.....	30	13	660	23,235	2,660	1,319	3,235	14,252	317,011	(NA)	2,623	15,468			
Minnesota (crushed and broken stone industry).....	27	9	399	2,040	323	634	1,453	4,174	5,987	500	542	4,354			
Iowa ⁵	115	22	1,600	8,674	1,317	3,239	6,352	20,502	27,701	3,639	1,731	20,383			
Missouri, total.....	183	42	2,908	14,431	2,542	5,508	12,247	36,318	47,851	(NA)	2,350	26,963			
Crushed and broken stone industry.....	172	36	2,566	12,650	2,200	4,825	10,466	28,005	38,189	5,933	1,966	18,725			
Crushed stone quarries in manufactures.....	11	6	342	21,781	2,342	683	1,781	8,313	39,662	(NA)	2,384	8,238			
North Dakota and South Dakota ⁵	7	4	125	584	82	191	357	891	1,649	241	147	2,075			
Nebraska ⁵	24	6	289	1,507	258	630	1,275	2,855	5,145	438	280	3,327			
Kansas, total.....	92	13	918	4,397	846	1,856	3,906	11,527	15,631	(NA)	901	11,656			
Crushed and broken stone industry.....	84	11	797	4,020	725	1,615	3,529	9,013	12,806	1,365	796	8,562			
Crushed stone quarries in manufactures.....	8	2	121	377	212	241	377	2,514	32,825	(NA)	2,105	3,094			
South Atlantic, total.....	383	180	9,798	45,635	8,559	19,173	36,773	131,654	184,668	(NA)	8,592	93,924			
Crushed and broken stone industry.....	343	165	9,006	42,047	7,767	17,589	33,185	119,741	168,369	13,222	8,180	84,591			
Crushed stone quarries in manufactures.....	40	15	792	23,588	2,792	1,584	3,588	11,913	316,299	(NA)	2,412	9,333			
Delaware and Maryland, total.....	34	18	995	5,252	848	1,807	3,737	15,077	22,233	(NA)	868	11,325			
Crushed and broken stone industry.....	28	15	755	4,463	608	1,327	2,948	13,293	18,991	1,171	815	9,134			
Crushed stone quarries in manufactures (Maryland).....	6	3	240	2,789	2240	480	789	1,784	3,242	(NA)	253	2,191			
Virginia, total.....	105	56	2,565	11,276	2,240	5,008	9,155	31,825	42,612	(NA)	2,031	19,744			
Crushed and broken stone industry.....	95	50	2,332	10,162	2,007	4,542	8,041	28,809	38,677	3,141	1,839	15,526			
Crushed stone quarries in manufactures.....	10	6	233	21,114	2,233	466	1,114	3,016	3,935	(NA)	2192	4,218			
West Virginia ⁵	37	9	593	2,995	496	961	2,374	7,030	10,100	550	683	6,790			
North Carolina ⁵	52	25	1,135	4,750	962	1,981	3,530	16,481	23,729	1,159	1,120	10,394			
South Carolina ⁵	18	13	728	2,734	639	1,402	2,301	9,274	12,139	1,026	510	4,176			
Georgia ⁵	37	30	1,789	8,339	1,602	3,725	7,033	23,166	35,578	3,306	1,424	17,898			
Florida, total.....	90	26	1,813	9,273	1,592	3,930	7,627	26,170	34,641	(NA)	(NA)	(NA)			
Crushed and broken stone industry.....	76	23	1,674	8,604	1,453	3,651	6,958	21,688	29,155	2,869	1,789	20,673			
Crushed stone quarries in manufactures.....	14	3	139	2,669	2139	279	669	4,482	5,486	(NA)	(NA)	(NA)			

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963										1958				
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)	
	Total	With 20 or more em- ploy- ees	Number	Payroll (\$1,000)	Number	Man- hours (1,000)	Wages (\$1,000)								
ALL CRUSHED AND BROKEN STONE QUARRIES—Continued															
East South Central, total.....															
Crushed and broken stone industry.....	245	104	5,048	21,949	4,458	10,003	18,492	71,212	24,311	(NA)	91,238	(NA)	4,487	45,548	
Crushed stone quarries in manufactures.....	224	95	4,647	19,820	4,057	9,200	16,363	63,361	22,154	7,271	81,230	11,556	4,043	37,868	
	21	9	2,401	22,129	2,401	803	2,129	7,851	2,157	(NA)	10,008	(NA)	2,444	7,680	
Kentucky ⁵															
	108	48	2,162	9,270	1,871	4,208	7,547	30,077	9,010	2,916	36,955	5,048	1,801	15,478	
Tennessee, total.....															
Crushed and broken stone industry.....	88	31	1,592	6,702	1,398	3,203	5,518	23,613	7,765	(NA)	30,303	(NA)	1,610	16,363	
Crushed stone quarries in manufactures.....	84	30	1,510	6,214	1,316	3,038	5,030	21,843	7,458	2,047	28,226	3,122	1,436	14,246	
	4	1	282	2,488	282	165	488	1,770	307	(NA)	32,077	(NA)	2,174	2,117	
Alabama, total.....															
Crushed and broken stone industry.....	44	24	1,222	5,590	1,117	2,449	5,040	15,547	7,092	(NA)	21,561	(NA)	61,076	613,707	
Crushed stone quarries in manufactures.....	32	17	975	4,336	870	1,954	3,786	11,441	5,686	2,308	16,049	3,386	1,806	68,144	
	12	7	247	21,254	247	495	1,254	4,106	1,406	(NA)	35,512	(NA)	2,670	65,563	
West South Central, total.....															
Crushed and broken stone industry.....	125	56	3,375	16,378	2,962	6,724	13,723	48,720	21,751	(NA)	67,959	(NA)	2,762	29,529	
Crushed stone quarries in manufactures.....	100	49	3,018	14,721	2,605	6,010	12,066	37,228	20,148	3,792	54,864	6,304	2,372	19,750	
	25	7	2,357	21,657	2,357	714	1,657	11,492	1,603	(NA)	13,095	(NA)	2,390	9,779	
Arkansas and Louisiana, total.....															
Crushed and broken stone industry.....	28	12	954	4,801	831	1,932	4,112	16,634	9,612	(NA)	26,120	(NA)	(NA)	(NA)	
Crushed stone quarries in manufactures.....	24	11	917	4,595	794	1,857	3,906	14,741	9,341	1,260	23,956	1,386	401	3,266	
	4	1	237	2,206	237	75	206	1,893	271	(NA)	32,164	(NA)	(NA)	(NA)	
Oklahoma, total.....															
Crushed and broken stone industry.....	36	15	798	3,856	671	1,475	3,150	10,172	3,579	(NA)	13,372	(NA)	(NA)	(NA)	
Crushed stone quarries in manufactures.....	32	15	766	3,681	639	1,411	2,975	8,654	3,294	699	11,569	1,078	780	5,362	
	4	-	232	2,175	232	64	175	1,518	285	(NA)	31,803	(NA)	(NA)	(NA)	
Texas, total.....															
Crushed and broken stone industry.....	61	29	1,623	7,721	1,460	3,317	6,461	21,914	8,560	(NA)	28,467	(NA)	1,466	(D)	
Crushed stone quarries in manufactures.....	44	23	1,335	6,445	1,172	2,742	5,185	13,833	7,513	1,833	19,339	3,840	1,191	11,122	
	17	6	288	21,276	2,288	575	1,276	8,081	1,047	(NA)	39,128	(NA)	2,275	(D)	
Mountain, total.....															
Crushed and broken stone industry.....	105	14	933	4,812	845	1,646	4,494	15,225	4,626	(NA)	19,525	(NA)	1,062	17,318	
Crushed stone quarries in manufactures.....	83	8	656	3,110	568	1,092	2,792	8,069	2,894	690	10,637	1,016	2,874	10,371	
	22	6	277	21,702	2,777	554	1,702	7,156	1,732	(NA)	38,888	(NA)	2,188	6,947	
Montana.....															
Wyoming ⁵	58	(5)	541	5,212	531	554	5,164	5,635	5,183	585	5,785	5,118	257	993	
Colorado ⁵	7	3	129	698	122	221	673	1,340	535	47	1,844	78	87	585	
	18	2	149	661	136	285	569	1,400	645	103	2,048	100	216	2,002	
New Mexico, total.....															
Crushed and broken stone industry.....	7	1	64	289	63	126	286	1,230	386	(NA)	1,602	(NA)	(NA)	(NA)	
Crushed stone quarries in manufactures.....	4	-	39	143	38	77	140	549	183	15	718	29	(NA)	(NA)	
	3	1	225	2,146	225	49	146	681	203	(NA)	384	(NA)	(NA)	(NA)	
Arizona, total.....															
Crushed and broken stone industry.....	27	3	192	978	181	341	920	3,585	1,023	(NA)	4,527	(NA)	(NA)	(NA)	
Crushed stone quarries in manufactures.....	21	1	130	642	119	217	584	1,652	274	274	2,194	355	58	519	
	6	2	262	2,336	262	124	336	1,933	400	(NA)	32,333	(NA)	(NA)	(NA)	
Utah, total.....															
Crushed and broken stone industry.....	13	3	191	986	147	290	900	2,992	684	(NA)	3,510	(NA)	323	6,622	
Crushed stone quarries in manufactures.....	10	2	122	555	78	151	469	2,093	402	75	2,329	(NA)	285	(NA)	
	3	1	269	2,431	269	139	431	899	282	(NA)	31,181	(NA)	238	(NA)	

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963							1958						
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)
	Total	With 20 or more em- ploy- ees	Number	Payroll (\$1,000)	Number	Man- hours	Wages (\$1,000)							
ALL CRUSHED AND BROKEN STONE QUARRIES—Continued														
Pacific, total.....	344	49	3,594	21,963	3,219	6,563	19,504	55,948	21,027	(NA)	75,142	(NA)	2,726	41,112
Crushed and broken stone industry.....	298	36	2,687	16,626	2,312	4,749	14,167	38,024	16,275	3,710	52,466	5,543	2,078	24,876
Crushed stone quarries in manufactures.....	46	13	2,907	25,337	2,907	1,814	5,337	17,924	4,752	(NA)	322,676	(NA)	2,648	16,236
Washington, total.....	62	5	389	2,359	338	670	2,110	5,617	2,014	(NA)	7,488	(NA)	(NA)	(NA)
Crushed and broken stone industry.....	52	4	309	1,826	258	510	1,577	4,243	1,669	401	5,769	544	385	3,552
Crushed stone quarries in manufactures.....	10	1	280	2,533	280	160	533	1,374	345	(NA)	31,719	(NA)	(NA)	(NA)
Oregon, total.....	75	9	602	3,362	547	1,043	3,037	5,899	3,709	(NA)	9,233	(NA)	(NA)	(NA)
Crushed and broken stone industry.....	66	9	558	3,147	503	953	2,822	5,129	3,561	434	8,315	809	301	2,899
Crushed stone quarries in manufactures.....	9	-	244	2,215	244	90	215	770	148	(NA)	3,918	(NA)	(NA)	(NA)
California, total.....	178	31	2,293	14,541	2,048	4,290	12,858	39,587	13,515	(NA)	51,976	(NA)	1,598	29,577
Crushed and broken stone industry.....	156	19	1,535	10,054	1,290	2,774	8,371	24,558	9,426	2,607	32,858	3,733	1,066	14,794
Crushed stone quarries in manufactures.....	22	12	2,758	24,487	2,758	1,516	4,487	15,029	4,089	(NA)	319,118	(NA)	2,532	14,783
Alaska and Hawaii, total.....	29	4	310	1,701	286	560	1,499	4,845	1,789	(NA)	6,445	(NA)	(NA)	(NA)
Crushed and broken stone industry.....	24	4	285	1,599	261	512	1,397	4,094	1,619	268	5,324	457	326	3,631
Crushed stone quarries in manufactures.....	5	-	225	2102	225	48	102	751	170	(NA)	3,921	(NA)	(NA)	(NA)
CRUSHED AND BROKEN LIMESTONE														
United States, total.....	1,870	590	36,250	188,936	31,402	69,390	154,552	514,677	180,549	(NA)	676,450	(NA)	136,407	145,017
Crushed and broken limestone subindustry.....	1,614	496	31,290	161,708	26,442	59,471	127,324	409,241	153,740	40,795	544,205	59,571	31,507	334,803
Crushed limestone quarries in manufactures.....	256	94	24,960	227,228	24,960	9,919	27,228	105,436	26,809	(NA)	313,245	(NA)	24,900	115,368
New England, total.....	24	9	402	1,943	360	808	1,568	5,618	2,347	(NA)	37,626	(NA)	(NA)	(NA)
Crushed and broken limestone subindustry.....	16	6	2283	21,397	2241	570	1,022	2,914	1,258	164	3,833	503	224	1,392
Crushed limestone quarries in manufactures.....	8	3	2,119	2,546	2,119	238	546	2,704	1,089	(NA)	3,793	(NA)	(NA)	(NA)
Maine.....	4	2	67	330	60	132	278	827	285	(NA)	1,080	(NA)	(NA)	(NA)
Massachusetts.....	7	2	107	476	104	209	456	1,687	1,016	(NA)	2,692	(NA)	(NA)	(NA)
Connecticut.....	6	2	77	381	67	163	318	1,447	388	(NA)	1,736	(NA)	(NA)	(NA)
Middle Atlantic, total.....	216	85	5,582	32,554	4,673	10,223	25,877	86,050	31,256	(NA)	114,224	(NA)	(NA)	(NA)
Crushed and broken limestone subindustry.....	178	69	4,703	27,439	3,794	8,465	20,762	69,518	26,147	6,050	92,583	9,132	5,564	62,020
Crushed limestone quarries in manufactures.....	38	16	2,879	25,115	2,879	1,758	5,115	16,532	5,109	(NA)	321,641	(NA)	(NA)	(NA)
New York, total.....	61	27	1,788	11,250	1,517	3,341	9,172	31,240	9,906	(NA)	40,565	(NA)	(NA)	(NA)
Crushed and broken limestone subindustry.....	52	23	1,648	10,429	1,377	3,062	8,351	28,335	9,225	2,036	36,979	2,617	1,697	23,892
Crushed limestone quarries in manufactures.....	9	4	2140	2,821	2,140	279	821	2,905	681	(NA)	3,586	(NA)	(NA)	(NA)
New Jersey ⁵	7	5	279	1,797	205	552	1,182	4,042	1,619	53	5,267	447	290	2,014
Pennsylvania ⁵	119	41	2,776	15,213	2,212	4,851	11,229	37,141	15,303	3,961	50,337	6,068	3,577	36,114
North Central, total.....	923	218	15,830	85,549	13,515	29,664	68,675	216,438	77,531	20,609	287,374	27,204	14,265	161,013
Crushed and broken limestone subindustry.....	846	191	14,299	77,413	11,984	26,605	60,539	184,282	69,483	(NA)	247,170	(NA)	(NA)	(NA)
Crushed limestone quarries in manufactures.....	77	27	2,531	28,136	2,531	3,059	8,136	32,156	8,048	(NA)	340,204	(NA)	(NA)	(NA)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963										1958				
	Establish- ments,number	All employees			Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)	
		With 20 or more em- ploy- ees	Number	Payroll (\$1,000)	Number	Man- hours	Wages (\$1,000)								
Total															
CRUSHED AND BROKEN LIMESTONE—Continued															
East North Central ⁵	442	107	8,793	49,372	7,277	15,861	38,000	120,929	41,456	12,208	159,057	15,536	9,111	106,410	
Ohio ⁵	98	34	2,574	13,411	2,195	4,936	10,824	34,171	13,272	3,218	45,610	5,051	2,931	26,302	
Indiana.....	83	29	2,142	27,368	2,143	2,674	5,782	18,069	7,430	(NA)	324,639	(NA)	51,045	512,241	
Illinois, total.....	163	34	2,721	15,796	2,300	5,071	12,170	42,721	13,696	(NA)	56,403	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	150	32	2,477	14,510	2,056	4,583	10,884	38,445	12,351	4,484	50,782	4,498	2,625	41,287	
Crushed limestone quarries in manufactures....	13	2	244	21,286	244	488	1,286	4,276	1,345	(NA)	5,621	(NA)	(NA)	(NA)	
Michigan.....	48	9	21,450	29,288	2,120	2,220	6,881	28,410	5,527	(NA)	33,379	(NA)	51,609	518,400	
Wisconsin ⁵	72	8	1,035	5,807	846	1,784	4,641	8,268	4,138	1,721	12,343	1,784	901	8,180	
West North Central ⁵	404	84	5,506	28,041	4,707	10,744	22,539	63,353	28,027	8,401	88,113	11,668	5,154	54,603	
Minnesota (crushed and broken limestone sub- industry).....	23	8	354	1,734	282	544	1,179	3,544	1,567	201	4,823	489	505	4,053	
Missouri ⁵	164	36	2,511	12,478	2,147	4,743	10,298	27,440	10,970	4,971	37,610	5,771	1,862	18,110	
South Dakota.....	6	3	291	240	270	156	290	886	583	(NA)	31,439	(NA)	(NA)	(NA)	
Nebraska ⁵	24	6	289	1,507	258	630	1,275	2,855	2,046	682	5,145	438	(NA)	(NA)	
Kansas, total.....	85	12	851	4,108	785	1,734	3,649	10,984	4,183	(NA)	14,702	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	77	10	730	3,731	664	1,493	3,272	8,470	3,872	771	11,877	1,236	744	8,159	
Crushed limestone quarries in manufactures....	8	2	121	2,377	212	241	377	2,514	311	(NA)	32,825	(NA)	(NA)	(NA)	
South Atlantic, total.....	237	102	5,348	25,688	4,739	10,809	21,109	69,951	25,341	(NA)	93,828	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	201	88	4,725	22,423	4,116	9,562	17,844	58,575	21,983	4,967	79,094	6,431	4,662	48,604	
Crushed limestone quarries in manufactures....	36	14	623	23,265	623	1,247	3,265	11,376	3,358	(NA)	314,734	(NA)	(NA)	(NA)	
Maryland ⁵	15	9	425	2,399	375	852	1,784	6,919	2,061	468	9,025	423	(NA)	(NA)	
Virginia ⁵	62	32	1,466	5,947	1,275	2,790	4,757	14,688	5,122	1,438	19,358	1,890	1,268	9,933	
West Virginia ⁵	26	9	519	2,551	441	834	2,000	6,191	2,682	508	8,906	475	644	6,566	
North Carolina ⁵	8	4	(7)	(7)	156	334	560	3,414	1,059	386	4,641	218	212	2,212	
South Carolina ⁵	4	3	159	552	136	281	429	1,572	26	26	1,857	120	(NA)	(NA)	
Georgia ⁵	10	8	310	1,650	280	820	1,356	4,103	2,210	275	6,152	436	193	2,435	
Florida, total.....	90	26	71,985	79,993	1,592	3,930	7,627	26,170	9,474	(NA)	34,641	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	76	23	71,846	79,324	1,453	3,651	6,958	21,688	8,470	1,866	29,155	2,869	1,675	19,446	
Crushed limestone quarries in manufactures....	14	3	1,139	2,669	1,453	279	669	4,482	1,004	(NA)	35,486	(NA)	(NA)	(NA)	
East South Central ⁵	212	92	4,301	18,437	3,745	8,532	15,168	60,347	21,140	6,091	77,481	10,097	3,858	36,584	
Kentucky ⁵	108	48	2,162	9,270	1,871	4,208	7,547	30,077	9,010	2,916	36,955	5,048	1,784	15,286	
West South Central, total.....	98	45	2,425	11,669	2,136	4,747	9,667	33,970	11,833	(NA)	43,419	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	73	38	2,068	10,012	1,779	4,033	8,010	22,478	10,230	2,456	30,324	4,840	1,901	15,695	
Crushed limestone quarries in manufactures....	25	7	357	2,357	1,779	714	1,657	11,492	1,603	(NA)	5,105	(NA)	(NA)	(NA)	
Arkansas and Louisiana, total.....	19	7	290	1,170	272	594	1,065	4,597	1,356	(NA)	5,864	(NA)	(NA)	(NA)	
Crushed and broken limestone subindustry.....	15	6	253	964	235	519	859	2,704	1,085	258	3,700	347	159	1,281	
Crushed limestone quarries in manufactures....	4	1	237	2,206	237	75	206	1,893	271	(NA)	32,164	(NA)	(NA)	(NA)	

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963										1958		
	Establishments, number	All employees		Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of purchased machinery in- stalled	Value of ship- ments and receipts (\$1,000)	Capital ex- pend- itures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)
		With 20 or more em- ploy- ees	Number	Payroll (\$1,000)	Number	Man- hours								Wages ($1,000)
CRUSHED AND BROKEN LIMESTONE—Continued													
West South Central—Continued													
Oklahoma, total.....	27	13	678	3,374	558	1,212	2,700	8,856	2,676	(NA)	11,215	(NA)	(NA)
Crushed and broken limestone subindustry.....	23	13	646	3,199	526	1,148	2,525	7,338	2,391	573	9,412	890	757
Crushed limestone quarries in manufactures.....	4	-	232	1,175	232	64	175	1,518	285	(NA)	31,803	(NA)	(NA)
Texas, total.....	52	25	1,457	7,125	1,306	2,941	5,902	20,517	7,801	(NA)	26,340	(NA)	(NA)
Crushed and broken limestone subindustry.....	35	19	1,169	5,849	1,018	2,366	4,626	12,436	6,754	1,625	17,212	3,603	985
Crushed limestone quarries in manufactures.....	17	6	288	1,276	288	575	1,276	8,081	1,047	(NA)	39,128	(NA)	(NA)
Mountain ⁵	34	4	339	1,574	279	568	1,411	4,567	1,309	339	5,610	605	483
Colorado ⁵	11	1	99	427	93	186	385	1,115	343	73	1,465	66	(NA)
Utah, total.....	8	3	173	937	132	265	854	2,877	651	(NA)	3,356	(NA)	(NA)
Crushed and broken limestone subindustry.....	5	2	104	506	63	126	423	1,978	369	64	2,175	236	97
Crushed limestone quarries in manufactures.....	3	1	69	2431	269	139	431	899	282	(NA)	31,181	(NA)	(NA)
Pacific, total.....	86	20	1,376	7,810	1,308	2,744	7,365	23,220	6,065	(NA)	28,645	(NA)	(NA)
Crushed and broken limestone subindustry.....	54	8	572	3,013	504	1,136	2,568	6,560	2,190	119	8,110	759	550
Crushed limestone quarries in manufactures.....	32	12	2804	24,797	2804	1,608	4,797	16,660	3,825	(NA)	320,535	(NA)	(NA)
Washington.....	19	2	130	774	121	265	726	1,712	626	(NA)	2,224	(NA)	(NA)
Oregon.....	12	3	95	445	87	192	407	1,062	396	(NA)	1,376	(NA)	(NA)
California.....	46	15	2,122	26,467	2,072	2,229	6,111	19,573	4,837	(NA)	323,984	(NA)	260
CRUSHED AND BROKEN GRANITE													
United States, total.....	154	65	4,082	19,916	3,471	7,938	16,099	62,015	28,892	(NA)	90,208	(NA)	(NA)
Crushed and broken granite subindustry.....	150	65	4,060	19,826	3,449	7,894	16,009	61,697	28,746	6,486	89,744	7,185	13,309
Crushed granite quarries in manufactures.....	4	-	222	290	222	44	90	318	146	(NA)	3,464	(NA)	(8)
New England ⁵	5	3	160	876	101	229	595	1,340	371	197	1,827	81	167
Middle Atlantic.....	9	2	147	683	134	258	591	1,625	613	138	2,220	156	33
New Jersey.....	4	2	87	397	82	155	359	1,270	495	-	1,732	152	(NA)
North Central.....	7	2	68	372	60	139	327	767	643	104	1,362	152	149
West North Central.....	4	2	62	356	57	133	315	737	625	94	1,311	145	59
South ⁵	80	52	3,204	14,781	2,765	6,452	12,055	48,496	23,861	5,308	72,411	5,254	2,641
Virginia.....	16	10	468	2,201	407	963	1,829	7,211	3,081	548	10,167	673	378
South Carolina.....	14	10	569	2,182	503	1,121	1,872	7,702	2,890	596	20,282	906	(NA)
Georgia.....	18	15	1,012	4,731	909	2,234	4,000	12,652	7,725	2,215	20,265	2,327	778
Mountain.....	5	2	80	417	77	155	394	697	314	21	1,008	24	38
Pacific ⁵	44	4	401	2,697	312	661	2,047	8,772	2,944	718	10,916	1,518	314
CRUSHED AND BROKEN STONE, N.E.C.													
United States, total.....	556	115	8,942	52,705	7,306	15,358	39,182	121,438	59,237	(NA)	177,541	(NA)	86,995
Crushed and broken stone, n.e.c., subindustry.....	494	109	8,048	48,526	6,412	13,570	35,003	110,241	55,019	12,574	162,126	15,708	6,914
Crushed stone, n.e.c., quarries in manufactures.....	62	6	2894	24,179	2894	1,788	4,179	11,197	4,218	(NA)	315,155	(NA)	2,881

See footnotes at end of table.

Table 2.—GENERAL STATISTICS FOR THE CRUSHED AND BROKEN STONE INDUSTRY AND FOR CRUSHED STONE QUARRIES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry or subindustry and geographic area	1963							1958						
	Establish- ments, number	All employees		Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals for prep- aration, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital expendi- tures (\$1,000)	All em- ployees, number	Value added in mining (\$1,000)	
		Number	Payroll (\$1,000)	Number	Man- hours (1,000)	Wages (\$1,000)								
Total	With 20 or more em- ploy- ees													
CRUSHED AND BROKEN STONE, N.E.C.—Continued														
New England ⁵	19	7	442	3,187	353	796	2,401	6,657	2,342	635	8,824	810	92,700	934,517
Massachusetts ²	8	4	230	1,420	199	423	1,148	3,297	854	403	4,121	433	272	403
Connecticut ³	7	3	197	1,728	140	349	1,216	3,229	1,405	221	4,538	317	338	3,523
Middle Atlantic, total.....	109	33	2,866	20,037	2,110	4,848	12,721	40,266	19,362	(NA)	57,615	(NA)	(NA)	(NA)
Crushed and broken stone, n.e.c., subindustry.....	89	32	2,584	18,528	1,828	4,285	11,212	37,540	18,512	3,440	54,039	5,453	(9)	(9)
Crushed stone, n.e.c., quarries in manufactures.....	20	1	2282	21,509	2282	563	1,509	2,726	850	(NA)	33,576	(NA)	(NA)	(NA)
New Jersey ⁴	19	13	1,156	9,125	757	1,923	5,194	19,831	9,169	2,190	27,637	3,553	(NA)	(NA)
North Central, total.....	51	6	765	4,116	566	1,082	2,589	10,993	7,107	(NA)	17,922	(NA)	(NA)	(NA)
Crushed and broken stone, n.e.c., subindustry.....	41	5	698	3,841	499	948	2,314	10,113	6,716	1,154	16,651	1,332	1,114	9,800
Crushed stone, n.e.c., quarries in manufactures.....	10	1	267	2,275	267	134	275	880	391	(NA)	31,271	(NA)	(NA)	(NA)
East North Central ⁵	20	3	490	2,763	358	691	1,736	8,763	5,914	950	14,598	1,029	865	7,357
Ohio ⁶	6	-	90	600	37	71	146	938	118	101	1,035	122	554	4,021
West North Central ⁵	21	2	208	1,078	141	257	578	1,350	802	204	2,053	303	249	2,443
Kansas (crushed and broken stone, n.e.c., subindustry).....	7	1	67	289	61	122	257	543	389	126	929	129	52	403
South ⁷	101	39	2,373	10,935	2,024	4,220	8,537	30,434	4,142	4,142	45,153	4,460	1,533	16,412
Maryland.....	12	6	2420	22,032	2324	670	1,139	5,160	15,037	(NA)	39,185	(NA)	153	1,190
Virginia ⁸	17	8	398	2,014	325	789	1,455	6,910	2,368	452	578	578	193	2,199
West Virginia ⁹	11	-	74	444	55	127	374	839	322	108	1,194	75	(NA)	(NA)
Georgia.....	9	7	467	1,958	413	671	1,677	6,411	2,588	705	9,161	543	453	6,454
Oklahoma.....	9	2	120	482	113	263	450	1,316	903	126	2,157	188	(NA)	(NA)
Texas.....	9	4	166	596	154	376	559	1,397	759	208	2,127	237	(NA)	(NA)
Mountain ⁵	44	2	237	1,119	212	369	987	2,805	1,271	330	4,019	387	353	5,537
Montana.....	5	-	33	173	24	38	126	384	136	75	515	80	(NA)	(NA)
Idaho.....	8	-	31	147	30	54	145	239	271	61	507	64	(NA)	(NA)
Arizona ⁵	14	1	78	398	71	115	350	1,052	288	139	1,303	176	(NA)	(NA)
Pacific ⁵	200	24	1,714	10,916	1,496	2,952	9,552	22,692	11,141	2,873	33,440	3,266	1,214	14,857
Washington ⁵	37	3	227	1,419	192	355	1,221	3,444	1,306	351	4,725	376	228	1,882
Oregon ⁵	58	5	448	2,604	401	735	2,317	3,988	3,225	412	7,095	530	204	1,904
California ⁵	86	12	761	5,326	648	1,365	4,646	11,312	5,037	1,842	16,270	1,921	555	7,875
Hawaii.....	19	4	278	1,567	255	497	1,368	3,948	1,573	268	5,350	439	227	3,196

¹ Represents zero.² For the crushed and broken granite subindustry, excludes data for one establishment in Alaska with less than 5 employees and, for crushed limestone quarries in manufactures, excludes data for one quarry with 5 to 9 employees.³ For quarries in manufactures, number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.⁴ Includes the estimated value of stone produced and used in the same establishment in making cement, lime, ready-mixed concrete, and other manufactured products.⁵ Excludes data for one quarry in manufactures with 50 to 99 employees.⁶ Excludes data for crushed stone quarries in manufactures.⁷ Includes data for Mississippi, in which were operated two establishments in the crushed and broken stone industry, with a total of less than 5 employees, and one crushed stone quarry in manufactures, with 10 to 19 employees.⁸ Figures for North Carolina are included with those for Florida.⁹ Data for one granite quarry in manufactures are included with those for stone, n.e.c., quarries in manufactures.¹⁰ Data for Middle Atlantic are included with those for New England.

Table 3A.—PRIMARY PRODUCTS OF CRUSHED AND BROKEN STONE QUARRIES PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Excludes figures for quarries operated by Federal, State, and local governments)

Geographic area and type of stone	1963						1958					
	Net produc- tion	Produced and used in the same establishment in the manufacture of—			Net shipments including inter- plant transfers ¹		Net total produced and used or shipped	Produced and used in the same establishment in the manufacture of—		Net shipments including inter- plant transfers ¹		
		Hydraulic cement	Quicklime and hydrated lime ²	Ready- mixed con- crete and asphalt and tar paving mixtures and blocks (1,000 short tons)	Quan- tity	Value		Hydraulic cement	Quicklime and hydrated lime ²	Quan- tity	Value	
							(1,000 short tons)					(1,000 short tons)
	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(\$1,000)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(\$1,000)
United States:												
Crushed and broken stone, total...	607,052	75,353	11,772	5,717	505,450	792,085	484,592	65,871	12,986	405,240	616,649	
Limestone.....	474,661	75,139	11,772	4,168	377,519	538,123	348,360	65,674	12,986	309,491	459,564	
Granite.....	49,628	-	-	-	49,210	86,092	33,812	-	-	33,812	49,961	
Miscellaneous stone (slate, marble, sandstone, trap rock, and other stone).....	82,763	214	-	1,549	78,721	167,870	462,420	197	-	61,937	107,124	
New England:												
Crushed and broken stone, total...	13,741	(D)	(D)	946	11,494	21,470	49,927	(D)	(D)	8,598	17,864	
Limestone.....	4,283	(D)	(D)	(D)	3,148	5,941	1,893	(D)	(D)	(D)	2,386	
Granite.....	1,373	-	-	-	1,109	2,098	1,152	-	-	1,152	2,037	
Miscellaneous stone.....	8,085	-	-	(D)	7,237	13,431	46,882	-	-	(D)	13,441	
Maine, crushed and broken stone.....	948	(D)	-	-	443	1,133	968	(D)	(D)	(D)	1,005	
New Hampshire and Rhode Island, crushed and broken stone.....	514	-	-	-	514	1,043	4197	-	-	4197	483	
Vermont, crushed and broken stone...	1,123	-	-	-	1,048	2,254	416	-	(D)	(D)	3,367	
Massachusetts:												
Crushed and broken stone, total...	5,980	-	(D)	520	4,841	8,496	43,636	-	404	43,232	6,148	
Limestone.....	1,696	-	(D)	(D)	1,126	1,738	792	-	404	388	1,019	
Granite.....	1,054	-	-	-	870	1,731	672	-	-	672	1,287	
Miscellaneous stone.....	3,230	-	-	(D)	2,845	5,027	42,172	-	-	42,172	3,842	
Connecticut:												
Crushed and broken stone, total...	5,176	-	(D)	(D)	4,648	8,544	4,710	-	(D)	(D)	6,861	
Limestone (and granite).....	813	-	(D)	-	748	1,770	569	-	(D)	(D)	1,006	
Miscellaneous stone.....	4,363	-	-	(D)	3,900	6,774	4,141	-	-	4,141	5,855	
Middle Atlantic:												
Crushed and broken stone, total...	92,618	12,799	1,820	170	76,509	148,512	477,822	(D)	(D)	463,287	124,132	
Limestone.....	66,767	(D)	1,820	56	52,231	92,187	63,331	(D)	(D)	48,832	89,020	
Granite.....	1,357	-	-	-	1,202	2,221	484	-	-	484	1,216	
Miscellaneous stone.....	24,494	(D)	-	114	23,076	54,104	414,007	436	-	413,971	33,896	
New York:												
Crushed and broken stone, total...	26,798	3,283	(D)	(D)	23,187	44,240	424,760	(D)	(D)	420,658	41,667	
Limestone.....	21,962	3,283	(D)	(D)	18,617	33,955	22,072	(D)	(D)	17,970	34,887	
Granite and miscellaneous stone.	4,836	-	-	(D)	4,570	10,285	42,688	-	-	42,688	6,780	
New Jersey, crushed and broken stone	14,108	-	-	(D)	13,093	34,633	7,443	-	-	7,443	18,402	
Pennsylvania:												
Crushed and broken stone, total...	51,712	9,516	(D)	61	40,229	69,639	445,619	8,619	1,677	35,184	64,063	
Limestone.....	42,823	9,516	(D)	61	31,650	52,831	440,646	48,722	1,677	30,247	51,210	
Granite and miscellaneous stone.	8,889	-	-	-	8,579	16,808	44,973	436	-	4,937	12,853	
East North Central:												
Crushed and broken stone, total...	142,050	13,079	3,068	1,019	122,557	170,420	122,007	10,973	3,838	107,196	147,497	
Limestone.....	139,101	(D)	3,068	(D)	119,632	155,346	117,370	10,973	3,838	102,559	137,900	
Granite and miscellaneous stone.	2,949	(D)	-	(D)	2,925	15,074	34,637	(?)	-	37	9,597	
Ohio:												
Crushed and broken stone.....	40,611	3,830	2,735	(D)	33,296	47,657	35,219	3,886	3,688	27,645	42,768	
Limestone.....	39,584	(D)	2,735	(D)	32,289	45,607	34,414	3,856	3,688	26,870	39,277	
Indiana, crushed and broken stone...	18,908	1,871	(D)	(D)	16,274	21,769	14,247	1,662	-	12,585	17,112	
Illinois:												
Crushed and broken stone.....	40,492	3,183	117	723	35,692	49,817	35,135	(D)	(D)	32,439	48,969	
Limestone.....	40,492	3,183	117	723	35,692	49,817	34,813	(D)	(D)	32,117	48,495	
Michigan, crushed and broken stone..	30,162	4,195	-	(D)	25,652	27,396	25,341	(D)	-	(D)	22,822	
Wisconsin:												
Crushed and broken stone, total...	11,877	-	(D)	-	11,643	23,781	12,065	-	(D)	(D)	15,826	
Limestone.....	9,992	-	(D)	-	9,759	10,814	9,277	-	(D)	(D)	11,464	
Granite and miscellaneous stone.	1,885	-	-	-	1,884	12,967	2,788	-	-	2,788	4,362	

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF CRUSHED AND BROKEN STONE QUARRIES PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Geographic area and type of stone	1963						1958				
	Net produc- tion	Produced and used in the same establishment in the manufacture of—			Net shipments including inter- plant transfers ¹		Net total produced and used or shipped	Produced and used in the same establishment in the manufacture of—		Net shipments including inter- plant transfers ¹	
		Hydraulic cement	Quicklime and hydrated lime ²	Ready- mixed con- crete and asphalt and tar paving mixtures and blocks (1,000 short tons)	Quan- tity	Value		Hydraulic cement	Quicklime and hydrated lime ²	Quan- tity	Value
	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(\$1,000)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(\$1,000)
West North Central:											
Crushed and broken stone, total...	71,474	9,108	(D)	(D)	59,294	86,783	67,109	8,837	2,535	55,737	80,107
Limestone.....	68,531	9,108	(D)	(D)	56,447	81,830	563,747	8,837	2,535	52,375	75,248
Granite and miscellaneous stone.	2,943		-	-	2,847	4,953	53,362	(⁵)	-	3,362	4,859
Minnesota:											
Crushed and broken stone.....	4,020	-	-	-	3,795	5,632	4,355	-	-	4,355	6,731
Limestone.....	3,180	-	-	-	3,058	4,212	3,806	-	-	3,806	5,700
Iowa, crushed and broken stone.....	21,468	2,394	(D)	-	18,893	25,518	21,706	2,123	-	19,583	27,399
Limestone.....	21,322	2,394	(D)	-	18,696	25,318	(NA)	(NA)	(NA)	(NA)	(NA)
Missouri:											
Crushed and broken stone.....	29,498	3,237	(D)	(D)	23,812	36,130	24,554	(D)	(D)	18,980	27,755
Limestone.....	28,455	3,237	(D)	(D)	22,787	34,388	23,864	(D)	(D)	18,094	26,855
North Dakota and South Dakota:											
Crushed and broken stone.....	1,208	-	(D)	-	1,165	2,074	1,635	-	(D)	(D)	2,439
Nebraska:											
Crushed and broken stone.....	4,114	(D)	-	-	2,924	4,812	3,508	(D)	-	(D)	3,851
Limestone.....	4,114	(D)	-	-	2,924	4,812	3,503	(D)	-	(D)	3,840
Kansas:											
Crushed and broken stone.....	11,166	(D)	-	(D)	8,705	12,617	11,351	2,534	-	8,817	11,932
Limestone.....	10,709	(D)	-	(D)	8,262	11,688	511,009	52,534	-	8,475	11,242
South Atlantic:											
Crushed and broken stone, total...	115,447	(D)	1,299	1,834	104,504	168,180	477,872	5,977	910	470,985	117,187
Limestone.....	64,580	(D)	1,299	(D)	53,401	78,749	46,697	5,919	910	39,868	62,820
Granite.....	36,410	-	-	-	37,020	55,169	423,482	-	-	423,482	35,741
Miscellaneous stone.....	14,457	(D)	-	(D)	14,083	34,262	7,693	58	-	7,635	18,626
Delaware and Maryland:											
Crushed and broken stone.....	12,268	1,568	(D)	(D)	10,512	19,373	7,468	(D)	(D)	6,205	12,561
Limestone.....	6,582	(D)	(D)	(D)	4,894	8,699	6,136	(D)	(D)	4,884	9,963
Virginia:											
Crushed and broken stone, total...	26,538	(D)	1,074	(D)	24,017	39,002	414,738	(D)	(D)	12,323	21,212
Limestone.....	16,370	(D)	1,074	(D)	13,891	19,879	10,571	(D)	(D)	(D)	14,263
Granite.....	6,442	-	-	-	6,504	10,067	42,944	-	-	(D)	4,670
Miscellaneous stone.....	3,726	-	-	(D)	3,622	9,056	1,223	-	-	1,223	2,279
West Virginia:											
Crushed and broken stone.....	7,139	(D)	(D)	(D)	5,526	10,139	5,228	(D)	-	(D)	9,074
Limestone.....	6,453	(D)	(D)	-	5,040	8,944	5,052	(D)	-	(D)	8,692
North Carolina:											
Crushed and broken stone, total...	13,969	(D)	-	-	14,554	24,117	11,505	-	-	11,505	16,436
Limestone and granite.....	11,111	(D)	-	-	11,619	18,171	10,155	-	-	10,155	14,755
Miscellaneous stone.....	2,858	-	-	-	2,935	5,946	1,350	-	-	1,350	1,681
South Carolina:											
Crushed and broken stone.....	8,573	(D)	-	-	7,745	11,683	4,869	(D)	-	(D)	6,722
Granite.....	7,182	-	-	-	7,054	10,010	4,084	-	-	4,084	6,283
Georgia:											
Crushed and broken stone.....	18,408	(D)	-	-	18,089	33,928	12,453	(D)	-	(D)	25,118
Limestone.....	2,656	(D)	-	-	5,069	1,724	(D)	-	-	(D)	3,852
Granite.....	13,504	-	-	-	13,822	19,877	8,445	-	-	8,445	12,961
Florida, crushed and broken stone...	28,552	(D)	-	1,470	24,061	29,938	21,611	(D)	-	(D)	26,064
East South Central:											
Crushed and broken stone, total...	65,410	5,522	733	(D)	56,865	78,988	44,444	4,404	1,168	38,872	53,802
Limestone.....	64,816	5,522	733	(D)	56,286	75,931	543,529	4,404	1,168	37,957	52,089
Granite and miscellaneous stone.	594		-	-	579	3,057	5915	(⁵)	-	915	1,713
Kentucky:											
Crushed and broken stone.....	24,937	(D)	-	(D)	24,278	34,655	15,385	-	-	15,385	21,057
Limestone.....	24,937	(D)	-	(D)	24,278	34,655	15,279	-	-	15,279	20,873
Tennessee, crushed and broken stone.	24,976	(D)	202	-	21,264	27,884	17,474	(D)	(D)	15,605	21,033
Alabama and Mississippi, crushed and broken stone.....	15,497	2,930	531	-	11,323	16,449	11,585	(D)	(D)	7,882	11,712

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF CRUSHED AND BROKEN STONE QUARRIES PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Geographic area and type of stone	1963						1958					
	Net produc- tion	Produced and used in the same establishment in the manufacture of—			Net shipments including inter- plant transfers ¹		Net total produced and used or shipped	Produced and used in the same establishment in the manufacture of—		Net shipments including inter- plant transfers ²		
		Hydraulic cement	Quicklime and hydrated lime ²	Ready- mixed con- crete and asphalt and tar paving mixtures and blocks (1,000 short tons)	Quan- tity (1,000 short tons)	Value (\$1,000)		Hydraulic cement	Quicklime and hydrated lime ²	Quan- tity (1,000 short tons)	Value (\$1,000)	
(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	(1,000 short tons)	
West South Central:												
Crushed and broken stone, total...	46,614	8,724	1,135	1,244	35,008	50,954	31,540	6,754	1,121	23,665	29,359	
Limestone.....	37,275	8,724	1,135	1,244	26,260	29,762	26,605	6,754	1,121	18,730	23,135	
Granite and miscellaneous stone.	9,339											
					8,748	21,192	4,935	(³)	-	4,935	6,224	
Arkansas and Louisiana, crushed and and broken stone.....	10,142	1,398	(D)	-	8,193	21,374	5,188	(D)	(D)	(D)	5,300	
Oklahoma:												
Crushed and broken stone.....	12,775	1,715	-	-	10,987	11,291	9,041	(D)	-	(D)	8,552	
Limestone.....	10,591	1,715	-	-	8,807	9,213	8,007	(D)	-	(D)	8,035	
Texas:												
Crushed and broken stone, total...	23,697	5,611	(D)	1,244	15,828	18,289	17,311	(D)	(D)	11,318	15,507	
Limestone.....	22,500	5,611	(D)	1,244	14,715	16,349	16,067	(D)	(D)	10,074	13,066	
Granite and miscellaneous stone.	1,197	-	-									
					1,113	1,940	1,244	-	-	1,244	2,441	
Mountain:												
Crushed and broken stone, total...	11,813	4,969	807	230	5,652	11,716	⁴ 18,901	⁴ 3,779	531	14,591	13,549	
Limestone.....	8,769	(D)	807	30	2,907	6,696	7,164	3,727	531	2,906	6,012	
Granite.....	648	-	-	-	623	903	102	-	-	102	247	
Miscellaneous stone.....	2,396	(D)	-	200	2,122	4,117	⁴ 11,635	⁴ 52	-	11,583	7,290	
Montana, crushed and broken stone...	1,141	(D)	(D)	-	548	809	889	(D)	(D)	(D)	(D)	
Idaho, crushed and broken stone.....	568	(D)	-	-	385	621	887	(D)	-	(D)	874	
Wyoming, crushed and broken stone...	1,439	(D)	-	-	1,144	1,857	599	(D)	-	(D)	864	
Colorado:												
Crushed and broken stone.....	2,466	(D)	-	-	996	2,099	⁴ 2,774	(D)	-	(D)	2,390	
Limestone.....	2,236	(D)	-	-	795	1,552	2,729	(D)	-	(D)	2,285	
New Mexico, crushed and broken stone	1,196	(D)	(D)	30	527	874	637	-	(D)	(D)	771	
Arizona:												
Crushed and broken stone.....	2,397	(D)	154	-	948	2,454	1,206	(D)	(D)	318	805	
Limestone.....	1,773	(D)	154	-	338	920	1,070	(D)	(D)	182	595	
Utah, crushed and broken stone.....	1,803	(D)	(D)	-	916	2,516	11,049	(D)	(D)	(D)	(D)	
Nevada, crushed and broken stone....	803	-	(D)	200	188	486	860	-	(D)	(D)	751	
Pacific:												
Crushed and broken stone, total...	47,885	12,803	433	102	33,567	55,062	34,970	12,070	⁶ 461	⁶ 21,986	33,152	
Limestone.....	20,539	(D)	433	(D)	7,207	11,681	⁶ 17,071	12,070	⁶ 461	⁶ 4,540	⁶ 8,093	
Granite.....	5,389	-	-	-	5,380	10,708	⁶ 4,520	-	-	⁶ 4,520	⁶ 6,114	
Miscellaneous stone.....	21,957	(D)	-	(D)	20,980	32,673	12,926	-	-	12,926	18,262	
Washington:												
Crushed and broken stone, total...	4,501	1,206	-	(D)	3,312	5,575	3,827	(D)	-	(D)	4,408	
Limestone.....	1,708	1,206	-	(D)	509	1,077	1,595	(D)	-	(D)	1,626	
Granite and miscellaneous stone.	2,793											
					2,803	4,498	2,232	-	-	2,232	2,782	
Oregon:												
Crushed and broken stone, total...	6,288	(D)	(D)	10	5,452	8,457	3,711	(D)	-	(D)	4,489	
Limestone.....	1,050	(D)	(D)	-	837	1,108	1,539	(D)	-	(D)	1,316	
Granite and miscellaneous stone.	5,238	-	-	10	4,615	7,349	2,172	-	-	2,172	3,173	
California:												
Crushed and broken stone, total...	34,108	10,926	(D)	43	22,601	36,235	25,246	11,020	461	13,765	20,222	
Limestone.....	17,111	10,926	(D)	-	5,700	9,143	13,937	11,020	461	2,456	5,151	
Granite.....	5,255	-	-	-	5,246	10,411	3,966	-	-	3,966	5,401	
Miscellaneous stone.....	11,742	-	-	43	11,655	16,681	7,343	-	-	7,343	9,670	
Alaska and Hawaii, total.....	2,988	(D)	-	1	2,202	4,795	2,186	-	(D)	(D)	4,033	
Limestone and granite.....	670	(D)	-	1	161	353	453	-	(D)	(D)	³ 683	
Miscellaneous stone.....	2,318	-	-	-	2,041	4,442	1,733	-	-	1,733	3,350	

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.

¹Represents gross shipments, including interplant transfers, less broken stone received from other establishments for crushing, screening, or washing.²Excludes data for quarries producing stone for lime manufacture where these activities are reported as parts of chemical establishments.³Figures for granite in Alaska are included with figures for limestone. The quantity of limestone produced and used in the same establishment in making lime in Hawaii is excluded from the figures shown for stone used in making lime and included with shipments. The estimated value of such stone is included in the value of shipments.⁴Includes some stone mined and used in the same establishment in making such products as asphalt and tar paving mixtures, nonclay refractories, and ready-mixed concrete. For the United States as a whole, such uses amounted to 495 thousand tons, and in the United States total, the figures for such granite are included with those for such miscellaneous stone.⁵The figures for limestone include, figures for granite and miscellaneous stone exclude, less than 40 thousand tons of stone other than limestone used in making cement.⁶Excludes figures for limestone and granite in Alaska and Hawaii.

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Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR CRUSHED AND BROKEN STONE SHIPPED BY
ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
All crushed and broken stone (net production).....1963...	165	164
.....1958...	131	138
Limestone.....1963...	157	164
.....1958...	128	140
Granite.....1963...	218	270
.....1958...	148	157
Miscellaneous stone.....1963...	187	168
.....1958...	141	107

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14C

INDUSTRY SERIES

preliminary
report

Sand and gravel

SIC Code 1441

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Sand and Gravel Industry shipped products valued at \$675 million, an increase of 20 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an increase of 10 percent from 1958 to a total of 41 thousand employees in 1963. Value

Table 1A.—GENERAL STATISTICS FOR SAND AND GRAVEL MINING OPERATIONS IN THE UNITED STATES FOR SELECTED YEARS
(Excludes sand and gravel operations by Federal, State, and local governments)

Item	Unit of measure	1963			1958			1954			1939 ¹
		Total	Sand and gravel industry	Sand and gravel mining in manufacturing establishments	Total	Sand and gravel industry	Sand and gravel mining in manufacturing establishments ²	Total	Sand and gravel industry	Sand and gravel mining in manufacturing establishments ³	
Establishments:											
Total.....	Number...	5,244	4,619	625	4,095	3,708	387	(NA)	3,939	(NA)	1,571
With 20 employees or more.....	do.....	536	514	22	511	484	27	(NA)	455	(NA)	(NA)
All employees:											
Number.....	Number...	43,925	41,048	42,877	39,700	37,159	42,541	40,307	36,495	43,812	19,777
Payroll.....	\$1,000...	232,501	219,687	42,814	183,776	172,757	41,019	162,313	147,613	44,700	25,215
Production, development, and exploration workers:											
Number.....	Number...	36,065	33,188	42,877	33,270	30,729	42,541	34,372	30,560	43,812	16,959
Man-hours.....	Thousand...	76,483	70,713	5,770	71,756	66,674	5,082	77,802	70,178	7,624	35,785
Wages.....	\$1,000...	183,053	170,239	12,814	145,839	134,820	11,019	133,956	119,256	14,700	18,822
Value added in mining.....	do.....	579,734	510,766	68,968	498,835	435,439	63,396	(NA)	357,583	(NA)	61,935
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	192,023	181,337	10,686	152,075	144,792	7,283	(NA)	5107,851	(NA)	517,468
Minerals received for preparation only.....	do.....	(NA)	3,821	(NA)	(NA)	870	(NA)	(NA)	(NA)	(NA)	(NA)
Contract work only.....	do.....	(NA)	21,568	(NA)	(NA)	15,367	(NA)	(NA)	14,792	(NA)	538
Cost of purchased machinery installed.....	do.....	(NA)	58,331	(NA)	(NA)	38,499	(NA)	(NA)	47,892	(NA)	(NA)
Value of shipments and receipts.....	do.....	754,329	674,675	679,654	632,817	562,138	670,679	489,982	467,198	622,784	(NA)
Value of net shipments and receipts ⁷	do.....	743,266	663,612	679,654	624,217	553,538	670,679	479,431	456,647	622,784	79,403
Capital expenditures.....	do.....	(NA)	75,759	(NA)	(NA)	56,592	(NA)	(NA)	46,128	(NA)	(NA)
Horsepower rating of power equipment.....	1,000 hp.	(NA)	4,631	(NA)	(NA)	(NA)	(NA)	(NA)	3,220	(NA)	699

(NA) Not available.

¹Except for number of establishments, excludes data for 2 nonproducing establishments. Also, excludes data for Alaska and Hawaii.

²Except for number of establishments, excludes data for 6 operations, each with less than 20 employees, in Alaska and Hawaii.

³Excludes data for 2 operations in Alaska.

⁴Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.

⁵Excludes the cost of sand and gravel received for preparation.

⁶Includes the estimated value of sand and gravel produced and used in the same establishment in making concrete brick and block, ready-mixed concrete, and other manufactured products.

⁷Represents the value of shipments and receipts less the value of shipments of products purchased for resale without further processing and less, wherever available, the value of sand and gravel and other minerals received for preparation.

September 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, A. Ross Eckler, Director



added in mining amounted to \$511 million in 1963, an increase of 17 percent from 1958.

The Sand and Gravel Industry represents establishments engaged primarily in operating sand and gravel pits and dredges, and in washing, screening, and otherwise preparing sand and gravel for construction and other special uses such as glass-making, molding, and abrasives. Separate figures are shown in tables 1B, 1C, 1D, and 2 for four subindustries representing establishments operated primarily for production of "Common Sand and Gravel," "Glass Sand," "Molding Sand," and "Industrial Sand, N.E.C." In 1963, the value of shipments and receipts for these subindustries amounted respectively to \$603 million, \$29 million, \$18 million, and \$25 million.

Figures for the Sand and Gravel Industry exclude data on sand and gravel mining operations which are parts of concrete brick and block, ready-mixed concrete, and other manufacturing establishments. Selected information was obtained on such mining operations. It is included in tables 1A, 2, and 3. The value of sand and gravel produced at these operations in 1963 is estimated at about \$80 million. Approximately 3 thousand persons were engaged in this mining.

Excluded throughout this report are sand and gravel mining operations by Federal, State, and local governments. These are not included in the scope of the census. The report includes, however, production by private contractors or subcontractors for government use. The government operations excluded may amount in recent years to about one-fourth of all sand and gravel production.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for

the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Sand and Gravel Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Sand and Gravel Industry amounted to \$675 million. Of this total, \$15 million were products primary to other industries; \$11 million were receipts for services, and \$7 million were receipts for products purchased for resale without further processing.

The total value of shipments for the industry (i.e., the total value of receipts of establishments classified in the industry) should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3A, which indicates that the total value of net shipments of sand and gravel was \$700 million in 1963. Of this, \$641 million represented shipments by the Sand and Gravel Industry. This industry produced about 91 percent of the total tonnage of commercial sand and gravel, most of the remainder being produced and shipped or used in manufacturing establishments.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for

the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1A, 1B, 1C, 1D, and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1A, 1B, 1C, 1D, and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports are being issued for other industries. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE COMMON SAND AND GRAVEL AND INDUSTRIAL SAND, N.E.C., SUBINDUSTRIES IN THE UNITED STATES FOR SELECTED YEARS

(Excludes sand and gravel operations by Federal, State, and local governments)

Item	Unit of measure	1963			1958	1954	1939 ¹
		Total	Common sand and gravel	Industrial sand, n.e.c.			
Establishments:							
Total.....	Number....	4,487	4,422	65	3,539	3,764	1,385
With 20 employees or more.....	...do.....	479	463	16	449	427	(NA)
All employees:							
Number.....	Number....	38,529	37,273	1,256	34,275	34,119	17,029
Payroll.....	\$1,000....	205,903	198,788	7,115	159,815	138,858	21,929
Production, development, and exploration workers:							
Number.....	Number....	31,171	30,138	1,033	28,367	28,450	14,584
Man-hours.....	Thousand...	66,286	63,962	2,324	61,927	65,675	31,324
Wages.....	\$1,000....	159,688	154,321	5,371	125,181	111,890	16,482
Value added in mining.....	...do.....	474,321	455,270	19,051	402,671	334,900	53,870
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	169,718	163,333	6,385	132,392	100,127	15,260
Minerals received for preparation only.....	...do.....	3,199	2,892	307	(NA)	(NA)	(NA)
Contract work only.....	...do.....	20,711	20,446	265	14,672	14,019	399
Cost of purchased machinery installed.....	...do.....	54,767	53,451	1,316	35,207	46,023	(NA)
Value of shipments and receipts.....	...do.....	627,926	603,044	24,882	517,422	436,845	69,130
Value of net shipments and receipts.....	...do.....	617,594	593,144	24,450	509,588	(NA)	69,130
Capital expenditures.....	...do.....	70,880	69,010	1,870	52,848	44,205	(NA)
Horsepower rating of power equipment.....	1,000 hp..	4,455	4,398	57	(NA)	3,078	643

(NA) Not available.

¹Except for number of establishments, excludes data for 2 nonproducing operations. Also, excludes data for Alaska and Hawaii.

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Table 1C.—GENERAL STATISTICS FOR THE GLASS SAND SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	39	45	44	40
With 20 employees or more.....	...do.....	22	19	20	(NA)
All employees:					
Number.....	Number.....	1,567	1,628	1,295	1,522
Payroll.....	\$1,000.....	9,140	7,497	5,098	2,056
Production, development, and exploration workers:					
Number.....	Number.....	1,223	1,339	1,144	1,280
Man-hours.....	Thousand....	2,738	2,833	2,505	2,667
Wages.....	\$1,000.....	6,649	5,730	4,279	1,456
Value added in mining.....	...do.....	22,611	20,672	13,701	4,625
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	7,465	8,014	5,021	1,512
Contract work only.....	...do.....	333	145	166	77
Cost of purchased machinery installed.....	...do.....	2,958	2,360	965	(NA)
Value of shipments and receipts.....	...do.....	29,098	28,343	18,591	(NA)
Value of net shipments and receipts.....	...do.....	28,873	(D)	(NA)	6,137
Capital expenditures.....	...do.....	3,936	2,703	1,096	(NA)
Horsepower rating of power equipment.....	1,000 hp....	97	(NA)	55	29

(D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.

Table 1D.—GENERAL STATISTICS FOR THE MOLDING SAND SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	93	124	131	146
With 20 employees or more.....	...do.....	13	16	8	(NA)
All employees:					
Number.....	Number.....	952	1,256	1,081	1,226
Payroll.....	\$1,000.....	4,644	5,445	3,657	1,230
Production, development, and exploration workers:					
Number.....	Number.....	794	1,023	966	1,095
Man-hours.....	Thousand....	1,689	1,914	1,998	1,794
Wages.....	\$1,000.....	3,898	3,909	3,087	884
Value added in mining.....	...do.....	13,834	12,096	8,982	3,440
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	4,154	4,386	2,703	696
Contract work only.....	...do.....	524	550	607	62
Cost of purchased machinery installed.....	...do.....	606	932	904	(NA)
Value of shipments and receipts.....	...do.....	17,651	16,373	11,762	(NA)
Value of net shipments and receipts.....	...do.....	17,145	(D)	(NA)	4,136
Capital expenditures.....	...do.....	943	1,041	827	(NA)
Horsepower rating of power equipment.....	1,000 hp....	79	(NA)	87	27

(D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 2.—GENERAL STATISTICS FOR THE SAND AND GRAVEL INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Excludes sand and gravel operations by Federal, State, and local governments)

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of purchased machinery installed (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	All employees, number	Value added in mining (\$1,000)
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
SAND AND GRAVEL INDUSTRY														
United States, total.....	4,619	514	41,048	219,687	33,188	70,713	170,239	510,766	181,337	58,331	674,675	75,759	37,159	435,439
Common sand and gravel subindustry....	4,422	463	37,273	198,788	30,138	63,962	154,321	455,270	163,333	53,451	603,044	69,010	34,275	402,671
Glass sand sub-industry.....	39	22	1,567	9,140	1,223	2,738	6,649	22,611	7,465	2,958	29,098	3,936	1,628	20,672
Molding sand subindustry.....	93	13	952	4,644	794	1,689	3,898	13,834	4,154	606	17,651	943	1,256	12,096
Industrial sand, n.e.c., subindustry...	65	16	1,256	7,115	1,033	2,324	5,371	19,051	6,385	1,316	24,882	1,870	(1)	(1)
New England, total.....	258	30	1,947	10,813	1,669	3,517	8,837	21,876	8,421	3,811	29,428	4,680	1,402	14,762
Common sand and gravel subindustry..	252	29	1,897	10,556	1,629	3,416	8,632	21,143	8,179	3,676	28,514	4,484	1,365	14,367
Industrial sand subindustries ²	6	1	50	257	40	101	205	733	242	135	914	196	137	1395
Maine.....	33	1	143	485	132	282	454	899	317	209	1,204	221	105	907
New Hampshire.....	25	2	154	880	121	277	643	1,761	833	293	2,510	377	89	884
Vermont.....	20	1	65	247	59	125	233	366	241	54	601	60	91	670
Massachusetts.....	109	16	1,026	5,709	870	1,822	4,640	11,784	4,462	2,059	15,758	2,547	589	6,112
Rhode Island.....	17	2	136	842	117	239	705	1,321	566	116	1,832	171	105	1,116
Connecticut.....	54	8	423	2,650	370	772	2,162	5,745	2,002	1,080	7,523	1,304	423	5,073
Middle Atlantic, total...	419	54	4,537	26,599	3,703	7,654	20,861	61,303	19,200	5,742	78,489	7,756	4,257	50,046
Common sand and gravel subindustry..	379	42	3,526	20,802	2,881	5,969	16,376	48,488	15,040	4,317	61,619	6,226	3,318	41,501
Glass sand sub-industry.....	6	3	423	2,625	321	736	1,951	5,195	1,829	1,176	7,039	1,161	356	3,580
Molding sand sub-industry.....	24	6	411	2,224	340	629	1,698	5,612	1,640	107	7,126	233	583	4,965
Industrial sand, n.e.c., subindustry.	10	3	177	948	161	320	836	2,008	691	142	2,705	136	(1)	(1)
New York, total.....	217	19	1,703	10,819	1,329	2,678	7,939	23,461	6,591	1,663	29,065	2,650	1,753	25,375
Common sand and gravel subindustry..	204	19	1,614	10,227	1,283	2,601	7,719	22,726	6,410	1,653	28,191	2,598	1,646	24,740
Industrial sand subindustries ²	13	-	89	592	46	77	220	735	181	10	874	52	1107	1635
New Jersey, total.....	108	20	1,367	7,557	1,146	2,393	6,241	19,872	7,174	1,966	26,367	2,645	1,174	12,889
Common sand and gravel subindustry..	90	10	795	4,377	647	1,390	3,507	11,624	4,267	842	15,382	1,351	1708	17,785
Industrial sand subindustries ²	18	10	572	3,180	499	1,003	2,734	8,248	2,907	1,124	10,985	1,294	1466	15,104
Pennsylvania, total....	94	15	1,467	8,223	1,228	2,583	6,681	17,970	5,435	2,113	23,057	2,461	1,330	11,782
Common sand and gravel subindustry..	85	13	1,117	6,198	951	1,978	5,150	14,138	4,363	1,822	18,046	2,277	1964	18,976
Industrial sand subindustries ²	9	2	350	2,025	277	605	1,531	3,832	1,072	291	5,011	184	1366	12,806
East North Central, total	1,232	103	9,172	51,046	7,274	15,235	38,685	121,170	38,405	13,617	156,131	17,061	9,700	116,602
Common sand and gravel subindustry..	1,175	90	8,049	44,530	6,378	13,193	33,565	100,740	33,121	12,159	131,342	14,678	18,887	1105,397
Glass sand sub-industry.....	8	5	252	1,531	213	459	1,283	5,038	1,518	709	6,078	1,187	368	6,018
Molding sand sub-industry.....	36	4	359	1,664	285	694	1,517	6,198	1,354	359	7,411	500	445	5,187
Industrial sand, n.e.c., subindustry.	13	4	512	3,321	398	889	2,320	9,194	2,412	390	11,300	696	(1)	(1)
Ohio, total.....	325	31	2,585	14,175	2,196	4,308	10,580	37,311	8,467	3,514	44,714	4,578	2,604	31,576
Common sand and gravel subindustry..	309	28	2,348	12,873	1,983	3,890	9,473	33,835	7,355	3,423	40,368	4,245	12,337	128,789
Industrial sand subindustries ²	16	3	237	1,302	213	418	1,107	3,476	1,112	91	4,346	333	1267	12,787
Indiana, total.....	192	13	1,248	6,906	943	2,149	5,279	15,923	5,239	2,147	21,163	2,146	1,335	12,917
Common sand and gravel subindustry..	187	13	1,212	6,738	923	2,107	5,198	15,569	5,071	2,147	20,654	2,146	(NA)	(NA)
Industrial sand subindustries ²	5	-	36	168	20	42	81	354	168	509	509	509	(NA)	(NA)
Illinois, total.....	209	28	2,150	12,369	1,684	3,630	9,259	23,780	9,857	3,842	33,540	3,939	2,370	32,745
Common sand and gravel subindustry..	199	23	1,657	9,066	1,308	2,818	7,001	15,242	7,422	3,040	22,794	2,910	12,069	127,984
Industrial sand subindustries ²	10	5	493	3,303	376	812	2,258	8,538	2,435	802	10,746	1,029	1301	14,761
Michigan, total.....	285	19	1,957	10,781	1,477	3,194	8,368	29,033	8,924	2,497	36,441	4,013	2,102	26,024
Common sand and gravel subindustry..	272	16	1,730	9,702	1,298	2,645	7,242	23,204	7,857	2,073	29,929	3,205	11,990	123,714
Industrial sand subindustries ²	13	3	227	1,079	179	549	1,126	5,829	1,067	424	6,512	808	1112	12,310

Table 2.—GENERAL STATISTICS FOR THE SAND AND GRAVEL INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
East South Central—Continued														
Wisconsin, total.....	221	12	1,232	6,815	974	1,954	5,199	15,123	5,918	1,617	20,273	2,385	1,289	13,340
Common sand and gravel subindustry..	208	10	1,102	6,151	866	1,733	4,651	12,890	5,416	1,617	17,597	2,385	1,205	12,386
Industrial sand subindustries ²	13	2	130	664	108	221	548	2,233	502		2,676		184	1,954
West North Central, total.....	831	43	4,588	22,120	3,843	8,095	18,367	50,352	19,988	6,671	69,205	7,806	4,456	44,747
Common sand and gravel subindustry..	816	39	4,409	21,041	3,682	7,788	17,479	47,064	18,950	6,502	64,956	7,560	4,364	44,014
Glass sand and molding sand subindustries.....	8	2	76	428	68	168	361	1,181	444	58	1,613	70	92	733
Industrial sand, n.e.c., subindustry..	7	2	103	651	93	139	527	2,107	594	111	2,636	176	(1)	(1)
Minnesota.....	209	8	1,182	5,854	980	1,814	4,709	11,581	5,148	1,274	16,564	1,439	1,282	14,256
Iowa.....	132	7	716	3,265	623	1,375	2,814	8,771	3,444	1,000	12,088	1,127	727	8,546
Missouri, total.....	93	9	697	3,510	590	1,234	2,947	9,712	2,849	1,495	12,327	1,729	788	6,307
Common sand and gravel subindustry..	86	7	582	2,794	486	1,056	2,324	7,469	2,170	1,336	9,411	1,564	(NA)	(NA)
Industrial sand subindustries ²	7	2	115	716	104	178	623	2,243	679	159	2,916	165	(NA)	(NA)
North Dakota and South Dakota.....	107	8	546	2,576	483	1,096	2,314	5,089	2,503	904	7,560	936	442	4,387
Nebraska.....	162	5	887	4,152	714	1,668	3,248	8,655	3,306	1,237	11,772	1,426	705	5,945
Kansas.....	128	6	560	2,763	453	908	2,335	6,544	2,738	761	8,894	1,149	512	5,306
South Atlantic, total....	358	56	4,348	20,049	3,579	8,112	15,812	51,797	19,161	4,953	68,448	7,463	4,193	43,522
Common sand and gravel subindustry..	340	48	3,644	16,419	3,050	6,906	13,458	44,464	16,698	4,475	58,992	6,645	3,654	37,961
Glass sand subindustry.....	9	6	586	3,125	431	945	1,978	6,573	1,724	391	7,968	720	359	3,561
Industrial sand, n.e.c., subindustry..	9	2	118	505	98	261	376	760	739	87	1,488	98	(1)	(1)
Delaware and Maryland..	67	14	1,083	5,891	921	2,093	4,800	15,897	5,032	1,109	20,264	1,774	808	8,208
Virginia, total.....	50	12	760	3,632	677	1,407	3,201	8,407	4,632	1,251	12,641	1,649	848	9,034
Common sand and gravel subindustry..	46	10	657	3,224	590	1,218	2,885	7,645	4,203	1,182	11,486	1,544	(NA)	(NA)
Industrial sand subindustries ²	4	2	103	408	87	189	316	762	429	69	1,155	105	(NA)	(NA)
West Virginia, total....	20	8	656	3,564	490	1,065	2,317	9,112	1,964	713	10,851	938	620	8,312
Common sand and gravel subindustry..	16	6	242	1,179	212	457	971	4,314	976	512	5,287	515	(NA)	(NA)
Industrial sand subindustries ²	4	2	414	2,385	278	608	1,346	4,798	988	201	5,564	423	(NA)	(NA)
North Carolina.....	61	6	515	2,028	463	1,189	1,817	6,085	1,980	432	7,899	598	486	4,324
South Carolina, total..	34	4	347	1,453	312	800	1,282	3,433	1,843	133	4,923	486	304	3,246
Common sand and gravel subindustry..	30	3	296	1,258	264	694	1,095	2,783	1,621	59	4,123	340	(NA)	(NA)
Industrial sand subindustries ²	4	1	51	195	48	106	187	650	222	74	800	146	(NA)	(NA)
Georgia.....	50	5	354	1,204	292	627	926	3,004	1,222	471	4,040	657	463	3,776
Florida.....	76	7	633	2,277	424	931	1,469	5,859	2,488	844	7,830	1,361	664	6,622
East South Central, total	187	36	2,302	9,851	1,927	4,387	8,064	23,120	10,204	2,383	32,294	3,413	2,030	17,848
Common sand and gravel subindustry..	172	34	2,132	9,134	1,782	4,076	7,520	21,025	9,353	2,344	29,560	3,162	1,893	16,675
Glass sand and industrial sand, n.e.c., subindustries	6	2	110	502	87	192	343	1,410	560	24	1,775	219	1,137	1,173
Molding sand subindustry.....	9	-	60	215	58	119	201	685	291	15	959	32		
Kentucky.....	33	5	387	2,015	299	762	1,559	5,425	2,333	624	7,535	847	362	3,713
Tennessee, total.....	50	9	587	2,822	525	1,159	2,381	6,628	3,196	440	9,469	795	611	5,204
Common sand and gravel subindustry..	43	9	525	2,575	466	1,028	2,150	5,828	2,891	412	8,399	732	(NA)	(NA)
Industrial sand subindustries ²	7	-	62	247	59	131	231	800	305	28	1,070	63	(NA)	(NA)
Alabama.....	50	13	677	2,561	568	1,217	2,079	6,183	2,350	612	8,123	1,022	391	2,989
Mississippi.....	54	9	651	2,453	535	1,249	2,045	4,884	2,325	707	7,167	749	666	5,942

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 2.—GENERAL STATISTICS FOR THE SAND AND GRAVEL INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of purchased machinery installed (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	All employees, number	Value added in mining (\$1,000)
	Total	With 20 employees, or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
West South Central, total.....	423	68	4,468	18,600	3,758	8,521	15,504	47,436	20,849	5,601	66,202	7,684	4,414	43,376
Common sand and gravel subindustry.	406	61	4,156	17,172	3,481	7,832	14,300	43,417	18,671	4,905	60,013	6,980	¹ 4,274	¹ 41,703
Glass sand subindustry.....	3	2	53	280	45	108	212	661	348	219	1,009	219	140	1,673
Molding sand subindustry.....	5	2	70	287	63	134	253	429	570	88	990	97		
Industrial sand, n.e.c., subindustry	9	3	189	861	169	447	739	2,929	1,260	389	4,190	388	(¹)	(¹)
Arkansas.....	57	7	466	1,966	422	953	1,741	4,547	2,238	763	6,393	1,155	389	2,845
Louisiana and Oklahoma	142	27	1,551	5,998	1,286	3,004	5,101	17,061	7,458	1,837	23,579	2,777	1,556	14,962
Texas, total.....	224	34	2,451	10,636	2,050	4,564	8,662	25,828	11,153	3,001	36,230	3,752	2,469	25,569
Common sand and gravel subindustry.	214	32	2,321	10,019	1,941	4,329	8,181	24,524	10,016	2,735	33,799	3,476	(NA)	(NA)
Industrial sand subindustries ²	10	2	130	617	109	235	481	1,304	1,137	266	2,431	276	(NA)	(NA)
Mountain, total.....	342	25	2,482	12,532	2,160	4,250	10,490	28,990	10,159	3,882	38,444	4,587	1,869	30,507
Common sand and gravel subindustry.	332	24	2,422	12,177	2,107	4,128	10,179	28,000	9,872	3,806	37,255	4,423	¹ 1,813	¹ 29,979
Industrial sand subindustries ²	10	1	60	355	53	122	311	990	287	76	1,189	164	¹ 56	¹ 528
Montana.....	43	-	184	881	167	334	822	2,035	707	555	2,783	514	192	3,467
Idaho.....	28	-	107	542	102	201	516	1,130	511	91	1,567	165	178	1,760
Wyoming.....	25	1	125	558	119	238	552	1,521	494	223	1,911	327	94	1,053
Colorado.....	90	6	658	3,810	531	1,059	2,834	8,869	2,953	831	11,624	1,029	457	5,639
New Mexico.....	50	5	326	1,621	299	602	1,512	3,435	1,269	731	4,844	591	309	3,769
Arizona.....	36	7	592	2,804	505	983	2,269	6,188	1,906	615	7,864	845	108	993
Utah.....	39	4	333	1,513	302	545	1,349	3,769	1,377	368	5,061	453	379	12,030
Nevada.....	31	2	157	803	135	288	636	2,043	942	468	2,790	663	152	1,796
Pacific, total.....	569	99	7,204	48,077	5,275	10,942	33,619	104,722	34,950	11,671	136,034	15,309	4,838	74,029
Common sand and gravel subindustry.	550	96	7,038	46,957	5,148	10,654	32,812	100,929	33,449	11,267	130,793	14,852	¹ 4,707	¹ 71,074
Glass sand subindustry.....	7	2	99	728	83	198	588	2,916	1,278	346	4,184	356	131	2,955
Molding sand subindustry.....	5	-	8	36	7	14	29	66	73	16	142	13		
Industrial sand, n.e.c., subindustry	7	1	59	356	37	76	190	811	150	42	915	88	(¹)	(¹)
Washington.....	92	6	485	3,251	417	876	2,936	7,621	3,639	1,484	10,912	1,832	427	5,942
Oregon.....	86	10	1,121	6,634	838	1,638	4,741	10,175	3,644	1,698	13,458	2,059	532	5,059
California, total.....	374	83	5,527	37,807	3,956	8,298	25,584	85,544	27,364	8,215	109,854	11,269	3,768	62,057
Common sand and gravel subindustry.	358	80	5,376	36,773	3,841	8,059	24,849	82,059	26,116	7,839	105,175	10,839	¹ 3,645	¹ 59,282
Industrial sand subindustries ²	16	3	151	1,034	115	239	735	3,485	1,248	376	4,679	430	¹ 123	¹ 2,775
Alaska and Hawaii.....	17	-	71	385	64	130	358	1,382	303	274	1,810	149	111	971
SAND AND GRAVEL MINING IN MANUFACTURING ESTABLISHMENTS														
United States, total	625	22	⁴ 2,877	⁴ 12,814	⁴ 2,877	5,770	12,814	68,968	10,686	(NA)	⁵ 79,654	(NA)	⁴ 62,541	⁶ 63,396
New England.....	32	2	110	568	110	223	568	3,249	450	(NA)	3,699	(NA)	127	3,342
Massachusetts.....	7	1	68	352	68	136	352	1,982	220	(NA)	2,202	(NA)	82	2,566
Connecticut.....	13	1	26	146	26	53	146	722	144	(NA)	866	(NA)	25	(NA)
Middle Atlantic.....	67	2	412	1,773	412	825	1,773	9,042	1,787	(NA)	10,829	(NA)	284	6,765
New York.....	27	-	241	1,097	241	482	1,097	4,718	1,278	(NA)	5,996	(NA)	134	4,957
New Jersey.....	9	-	35	188	35	70	188	1,583	142	(NA)	1,725	(NA)		
Pennsylvania.....	31	2	136	488	136	273	488	2,741	367	(NA)	3,108	(NA)	150	1,808
East North Central.....	113	7	469	2,078	469	940	2,078	11,928	1,351	(NA)	13,279	(NA)	342	10,858
Ohio.....	40	2	80	398	80	160	398	2,108	261	(NA)	2,369	(NA)	70	1,928
Indiana.....	9	1	79	318	79	159	318	1,898	212	(NA)	2,110	(NA)	72	1,213
Illinois.....	23	1	166	714	166	332	714	4,030	446	(NA)	4,476	(NA)	69	4,024
Michigan.....	24	2	82	399	82	164	399	2,401	266	(NA)	2,667	(NA)	66	2,407
Wisconsin.....	17	1	62	249	62	125	249	1,491	166	(NA)	1,657	(NA)	65	1,286
West North Central.....	71	1	144	614	144	286	614	3,464	440	(NA)	3,904	(NA)	210	3,737
Minnesota.....	23	1	48	234	48	95	234	1,180	160	(NA)	1,340	(NA)	76	1,528
Iowa.....	13	-	26	101	26	51	101	528	61	(NA)	589	(NA)	14	(NA)
Missouri.....	13	-	21	73	21	41	73	612	97	(NA)	709	(NA)	19	(NA)
Kansas.....	8	-	21	87	21	41	87	483	46	(NA)	529	(NA)	47	(NA)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

Table 2.—GENERAL STATISTICS FOR THE SAND AND GRAVEL INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
SAND AND GRAVEL MINING IN MANUFACTURING ESTABLISHMENTS—Continued														
South Atlantic.....	76	-	206	879	206	413	879	3,800	457	(NA)	4,257	(NA)	229	5,873
Delaware.....	4	-	16	82	16	33	82	500	53	(NA)	553	(NA)	(NA)	(NA)
Virginia.....	6	-	24	98	24	48	98	540	40	(NA)	580	(NA)	(NA)	(NA)
North Carolina.....	15	-	21	86	21	43	86	487	54	(NA)	541	(NA)	(NA)	(NA)
Florida.....	20	-	27	106	27	54	106	501	97	(NA)	598	(NA)	7138	72,813
East South Central.....	26	3	114	442	114	226	442	2,012	268	(NA)	2,280	(NA)	70	1,692
Tennessee.....	5	2	51	202	51	101	202	799	74	(NA)	873	(NA)	48	(NA)
Alabama.....	11	1	46	172	46	91	172	853	154	(NA)	1,007	(NA)	(NA)	(NA)
West South Central.....	52	3	170	627	170	340	627	3,868	667	(NA)	4,535	(NA)	368	5,490
Oklahoma.....	5	-	21	84	21	42	84	472	53	(NA)	525	(NA)	(NA)	(NA)
Texas.....	29	3	130	479	130	260	479	2,972	571	(NA)	3,543	(NA)	184	2,554
Mountain.....	70	3	570	2,728	570	1,151	2,728	15,157	2,042	(NA)	17,199	(NA)	477	12,796
Idaho.....	8	-	88	353	88	176	353	1,989	221	(NA)	2,210	(NA)	34	1,342
Colorado.....	17	-	69	375	69	139	375	2,129	185	(NA)	2,314	(NA)	63	2,343
New Mexico.....	8	1	85	441	85	170	441	2,480	276	(NA)	2,756	(NA)	50	2,057
Arizona.....	11	2	225	1,049	225	460	1,049	5,723	636	(NA)	6,359	(NA)	282	5,287
Utah.....	11	-	27	140	27	55	140	724	100	(NA)	824	(NA)	27	(NA)
Nevada.....	5	-	57	287	57	113	287	1,717	585	(NA)	2,302	(NA)	(NA)	(NA)
Pacific.....	118	1	682	3,105	682	1,366	3,105	16,448	3,224	(NA)	19,672	(NA)	6434	612,843
Washington.....	22	-	121	558	121	242	558	2,862	345	(NA)	3,207	(NA)	90	3,215
California.....	79	1	449	2,039	449	899	2,039	10,514	2,417	(NA)	12,931	(NA)	285	7,629

- Represents zero. (NA) Not available.

¹Figures for the Industrial Sand, N.E.C., Subindustry are included with those for the Common Sand and Gravel Subindustry.²Represents the Glass Sand, Molding Sand, and Industrial Sand, N.E.C., Subindustries. No establishments in the Glass Sand Subindustry were reported for New England in 1963.³Represents the Glass Sand and Molding Sand Subindustries. No establishments in the Molding Sand Subindustry were reported for 1963.⁴Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.⁵Includes the estimated value of sand and gravel produced and used in the same establishment in making concrete brick and block, ready-mixed concrete, and other manufactured products.⁶Excludes data for Alaska and Hawaii.⁷Not entirely comparable with the 1963 figures, since the classification of certain establishments was changed after 1958 from sand and gravel to crushed stone.

Table 3A.—PRIMARY PRODUCTS OF THE SAND AND GRAVEL INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(Excludes sand and gravel produced by Federal, State, and local government operations)

Product and geographic area	1963			1958		
	Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts		Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States:						
Sand and gravel production and shipments, total.....	627,628	609,643	700,117	553,959	527,053	569,828
Common sand, total.....	271,569	263,316	265,168	¹ 233,934	¹ 220,440	¹ 221,103
Run of pit or bank.....	32,869	32,287	26,810	¹ 44,586	¹ 44,507	¹ 36,143
Washed, screened, ground, or otherwise prepared.....	238,700	231,029	238,358	¹ 189,348	¹ 175,933	¹ 184,960
Class sand.....	8,109	8,097	27,210	7,446	7,421	21,955
Molding sand.....	7,755	7,757	20,988	7,763	7,709	19,021
Industrial sand, n.e.c.....	5,520	5,528	22,693	(¹)	(¹)	(¹)
Gravel, total.....	334,675	324,945	364,058	304,816	291,483	307,749
Run of pit or bank.....	45,086	44,080	35,246	72,427	72,675	51,950
Washed, screened, or otherwise prepared.....	289,589	280,865	328,812	232,389	218,808	255,799
Sand and gravel received for preparation in the sand and gravel industry.....	(X)	4,177	3,821	(X)	2,172	870
New England:						
Sand and gravel production and shipments, total.....	32,562	30,224	31,875	21,953	19,747	21,269
Common sand, total.....	16,864	15,585	15,454	¹ 9,635	¹ 8,802	¹ 8,299
Run of pit or bank.....	2,008	1,909	1,354	¹ 1,772	¹ 1,780	¹ 1,191
Washed, screened, ground, or otherwise prepared.....	14,856	13,676	14,100	¹ 7,863	¹ 7,022	¹ 7,108
Class sand, molding sand, and industrial sand, n.e.c.....	234	233	944	¹ 168	¹ 156	¹ 434
Gravel, total.....	15,464	14,406	15,477	12,150	10,789	12,536
Run of pit or bank.....	3,283	3,121	1,870	3,384	3,375	2,554
Washed, screened, or otherwise prepared.....	12,181	11,285	13,607	8,766	7,414	9,982
Sand and gravel production and shipments, by State:						
Maine.....	1,560	1,458	1,426	1,464	1,311	1,199
New Hampshire.....	2,689	2,429	2,467	1,133	1,080	1,249
Vermont.....	926	856	704	853	795	867
Massachusetts.....	17,749	16,321	16,311	11,308	9,775	10,250
Rhode Island.....	1,941	1,925	2,085	1,378	1,263	1,316
Connecticut.....	7,697	7,235	8,882	5,817	5,523	6,388
Middle Atlantic:						
Sand and gravel production and shipments, total.....	61,674	59,096	83,900	52,868	50,883	68,687
Common sand, total.....	32,154	30,750	36,567	¹ 27,848	¹ 26,840	¹ 30,675
Run of pit or bank.....	3,263	3,266	2,910	¹ 3,798	¹ 3,523	¹ 3,523
Washed, screened, ground, or otherwise prepared.....	28,891	27,484	33,657	¹ 24,050	¹ 23,044	¹ 27,152
Class sand.....	1,593	1,593	6,036	1,577	1,578	4,732
Molding sand.....	1,908	1,917	6,565	2,422	2,389	7,187
Industrial sand, n.e.c.....	1,012	1,011	4,346	(¹)	(¹)	(¹)
Gravel, total.....	25,007	23,825	30,386	21,021	20,076	26,093
Run of pit or bank.....	3,871	3,814	2,847	4,267	4,301	3,018
Washed, screened, or otherwise prepared.....	21,136	20,011	27,539	16,754	15,775	23,075
Sand and gravel production and shipments, by State:						
New York:						
Sand and gravel, total.....	29,348	27,160	31,764	27,822	27,114	31,657
Common sand, total.....	16,711	15,747	17,853	¹ 15,093	¹ 14,763	¹ 15,884
Run of pit or bank.....	1,560	1,554	1,043	¹ 2,228	¹ 2,228	¹ 1,989
Washed, screened, ground, or otherwise prepared.....	15,151	14,193	16,810	¹ 12,865	¹ 12,535	¹ 13,895
Class sand, molding sand, and industrial sand, n.e.c.....	283	283	887	¹ 449	¹ 414	¹ 905
Gravel, total.....	12,354	11,130	13,024	12,280	11,937	14,868
Run of pit or bank.....	2,999	2,952	1,957	3,151	3,153	2,017
Washed, screened, or otherwise prepared.....	9,355	8,178	11,067	9,129	8,784	12,851
New Jersey:						
Sand and gravel, total.....	16,108	16,087	26,572	12,168	11,683	18,127
Common sand, total.....	7,363	7,164	7,673	¹ 6,921	¹ 6,653	¹ 7,167
Run of pit or bank.....	1,359	1,370	1,408	¹ 1,169	¹ 1,169	¹ 1,054
Washed, screened, ground, or otherwise prepared.....	6,004	5,794	6,265	¹ 5,752	¹ 5,484	¹ 6,113
Class sand, molding sand, and industrial sand, n.e.c.....	2,798	2,798	10,859	¹ 2,398	¹ 2,398	¹ 7,097
Gravel, total.....	5,947	6,125	8,040	2,849	2,632	3,863
Run of pit or bank.....	583	576	654	(NA)	(NA)	(NA)
Washed, screened, or otherwise prepared.....	5,364	5,549	7,386	(NA)	(NA)	(NA)
Pennsylvania:						
Sand and gravel, total.....	16,218	15,849	25,564	12,878	12,086	18,903
Common sand.....	8,080	7,839	11,041	¹ 5,834	¹ 5,424	¹ 7,624
Washed, screened, ground, or otherwise prepared.....	7,736	7,497	10,582	(NA)	(NA)	(NA)
Class sand, molding sand, and industrial sand, n.e.c.....	1,432	1,440	5,201	¹ 1,152	¹ 1,155	¹ 3,917
Gravel.....	6,706	6,570	9,322	5,892	5,507	7,362
Washed, screened, or otherwise prepared.....	6,417	6,284	9,086	(NA)	(NA)	(NA)

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE SAND AND GRAVEL INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	1963			1958		
	Total production	Total shipments (including interplant transfers) or receipts		Total production	Total shipments (including interplant transfers) or receipts	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
East North Central:						
Sand and gravel production and shipments, total.....	148,733	147,147	155,389	141,906	138,035	146,387
Common sand, total.....	59,736	59,225	52,101	157,778	155,937	156,081
Run of pit or bank.....	7,710	7,674	5,301	112,144	112,039	119,966
Washed, screened, ground, or otherwise prepared.....	52,026	51,551	46,800	145,634	143,898	146,115
Glass sand.....	2,466	2,466	7,093	1,798	1,797	5,189
Molding sand.....	4,666	4,666	10,713	3,540	3,541	7,615
Industrial sand, n.e.c.....	1,514	1,528	6,131	(1)	(1)	(1)
Gravel, total.....	80,351	79,262	79,351	78,790	76,760	77,502
Run of pit or bank.....	11,684	11,588	7,840	13,554	13,835	11,598
Washed, screened, or otherwise prepared.....	68,667	67,674	71,511	65,236	62,925	65,904
Sand and gravel production and shipments, by State:						
Ohio:						
Sand and gravel, total.....	37,832	37,248	44,138	32,613	31,165	37,874
Common sand, total.....	15,724	15,542	15,064	113,668	113,119	113,886
Run of pit or bank.....	2,406	2,427	1,334	12,597	12,558	12,315
Washed, screened, ground, or otherwise prepared.....	13,318	13,115	13,730	111,111	110,561	111,571
Glass sand, molding sand, and industrial sand, n.e.c.....	1,078	1,074	4,388	1,977	1,994	13,668
Gravel, total.....	21,030	20,632	24,686	17,968	17,052	20,320
Run of pit or bank.....	2,812	2,777	1,909	3,082	3,216	2,787
Washed, screened, or otherwise prepared.....	18,218	17,855	22,777	14,886	13,836	17,533
Indiana:						
Sand and gravel, total.....	23,090	23,115	20,858	18,509	18,314	16,716
Common sand.....	10,829	10,857	8,894	(NA)	(NA)	(NA)
Washed, screened, ground, or otherwise prepared.....	10,110	10,146	8,438	(NA)	(NA)	(NA)
Glass sand, molding sand, and industrial sand, n.e.c.....	322	333	478	(NA)	(NA)	(NA)
Gravel, total.....	11,939	11,925	11,486	(NA)	(NA)	(NA)
Run of pit or bank.....	1,628	1,616	998	(NA)	(NA)	(NA)
Washed, screened, or otherwise prepared.....	10,311	10,309	10,488	(NA)	(NA)	(NA)
Illinois:						
Sand and gravel, total.....	29,620	29,029	33,440	36,627	36,193	41,050
Common sand, total.....	12,542	12,253	10,071	116,722	116,409	119,079
Run of pit or bank.....	1,182	1,175	727	12,838	12,815	12,593
Washed, screened, ground, or otherwise prepared.....	11,360	11,078	9,344	113,884	113,594	116,486
Glass sand, molding sand, and industrial sand, n.e.c.....	2,900	2,901	10,205	1,882	1,867	14,758
Gravel, total.....	14,178	13,875	13,164	18,023	17,917	17,213
Run of pit or bank.....	1,477	1,478	1,021	3,256	3,157	2,857
Washed, screened, or otherwise prepared.....	12,701	12,397	12,143	14,767	14,760	14,356
Michigan:						
Sand and gravel, total.....	36,422	36,369	36,709	34,565	33,319	33,493
Common sand, total.....	14,403	14,428	12,268	112,964	112,490	111,103
Run of pit or bank.....	2,220	2,226	1,766	13,800	13,773	12,689
Washed, screened, ground, or otherwise prepared.....	12,183	12,202	10,502	119,164	118,717	118,414
Glass sand, molding sand, and industrial sand, n.e.c.....	3,210	3,216	6,267	1,429	1,428	12,441
Gravel, total.....	18,809	18,725	18,174	20,172	19,401	19,949
Run of pit or bank.....	1,750	1,749	1,512	2,423	2,385	2,328
Washed, screened, or otherwise prepared.....	17,059	16,976	16,662	17,749	17,016	17,621
Wisconsin:						
Sand and gravel, total.....	21,769	21,386	20,244	19,592	19,044	17,254
Common sand, total.....	6,238	6,145	5,804	16,842	16,582	16,055
Run of pit or bank.....	1,183	1,135	1,018	12,005	11,949	11,530
Washed, screened, ground, or otherwise prepared.....	5,055	5,010	4,786	14,837	14,633	14,525
Glass sand, molding sand, and industrial sand, n.e.c.....	1,136	1,136	2,599	1,683	1,682	11,460
Gravel, total.....	14,395	14,105	11,841	12,067	11,780	9,739
Run of pit or bank.....	4,017	3,968	2,400	3,145	3,145	2,302
Washed, screened, or otherwise prepared.....	10,378	10,137	9,441	8,922	8,635	7,437
West North Central:						
Sand and gravel production and shipments, total.....	70,615	69,272	68,514	62,615	59,604	55,384
Common sand, total.....	27,991	27,311	23,588	124,000	122,749	119,929
Run of pit or bank.....	2,583	2,878	1,780	14,870	14,815	14,056
Washed, screened, ground, or otherwise prepared.....	25,408	24,433	21,808	119,130	117,934	115,873
Glass sand, molding sand, and industrial sand, n.e.c.....	1,556	1,555	4,811	1,612	1,613	11,415
Gravel, total.....	41,068	40,406	40,115	38,003	36,242	34,040
Run of pit or bank.....	4,755	4,758	3,372	8,969	8,736	7,807
Washed, screened, or otherwise prepared.....	36,313	35,648	36,743	29,034	27,506	26,233

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE SAND AND GRAVEL INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	1963			1958		
	Total production	Total shipments (including interplant transfers) or receipts		Total production	Total shipments (including interplant transfers) or receipts	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
West North Central—Continued						
Sand and gravel production and shipments, by State:						
Minnesota.....	19,280	18,570	16,306	17,486	16,270	16,406
Iowa.....	11,332	11,016	11,723	10,608	10,109	10,317
Missouri.....	10,471	10,306	13,013	7,853	7,865	8,493
North Dakota.....	3,865	3,853	3,697	7,247	6,880	5,140
South Dakota.....	3,444	3,441	3,792			
Nebraska.....	11,712	11,692	10,988	10,195	10,070	8,092
Kansas.....	10,511	10,394	8,995	9,226	8,410	6,936
South Atlantic:						
Sand and gravel production and shipments, total.....						
Common sand, total.....	31,938	31,141	32,267	¹ 30,734	¹ 29,318	¹ 25,847
Run of pit or bank.....	6,110	6,027	5,520	¹ 9,285	¹ 9,286	¹ 6,711
Washed, screened, ground, or otherwise prepared.....	25,828	25,114	26,747	¹ 21,449	¹ 20,032	¹ 19,136
Glass sand, molding sand, and industrial sand, n.e.c.....	2,259	2,257	8,978	¹ 1,653	¹ 1,653	¹ 5,566
Gravel, total.....	23,761	23,071	29,109	19,784	18,342	24,424
Run of pit or bank.....	4,405	4,086	3,404	3,637	3,636	3,140
Washed, screened, or otherwise prepared.....	19,356	18,985	25,705	16,147	14,706	21,284
Sand and gravel production and shipments, by State:						
Delaware.....	1,247	1,234	1,774	891	834	759
Maryland and District of Columbia ²	14,543	13,745	17,886	8,978	7,642	10,217
Virginia.....	10,326	10,214	12,890	8,511	8,415	10,673
West Virginia.....	5,491	5,376	10,907	5,276	5,168	8,647
North Carolina.....	8,285	8,140	8,909	5,496	5,402	5,548
South Carolina.....	3,411	3,358	4,732	4,072	3,959	4,085
Georgia.....	4,696	4,535	4,561	5,058	5,106	5,153
Florida.....	9,959	9,867	8,695	13,889	12,787	10,755
East South Central:						
Sand and gravel production and shipments, total.....						
Common sand, total.....	12,960	12,802	13,989	¹ 10,833	¹ 10,518	¹ 10,214
Run of pit or bank.....	1,725	1,692	1,607	¹ 2,234	¹ 2,209	¹ 2,003
Washed, screened, ground, or otherwise prepared.....	11,235	11,110	12,382	¹ 8,599	¹ 8,309	¹ 8,211
Glass sand, molding sand, and industrial sand, n.e.c.....	887	881	2,326	¹ 977	¹ 975	¹ 1,646
Gravel, total.....	13,442	13,240	15,846	10,278	10,151	11,169
Run of pit or bank.....	2,449	2,503	1,862	1,447	1,384	1,121
Washed, screened, or otherwise prepared.....	10,993	10,737	13,984	8,831	8,767	10,048
Sand and gravel production and shipments, by State:						
Kentucky.....	7,140	7,143	7,500	4,402	4,354	4,230
Tennessee.....	7,685	7,467	10,638	6,738	6,454	7,586
Alabama.....	5,878	5,602	7,347	3,865	3,795	4,143
Mississippi.....	6,586	6,711	6,676	7,083	7,041	7,070
West South Central:						
Sand and gravel production and shipments, total.....						
Common sand, total.....	27,442	27,014	27,682	¹ 22,742	¹ 21,813	¹ 21,050
Run of pit or bank.....	3,357	3,288	2,488	¹ 3,744	¹ 3,746	¹ 3,176
Washed, screened, ground, or otherwise prepared.....	24,085	23,726	25,194	¹ 18,998	¹ 18,067	¹ 17,874
Glass sand, molding sand, and industrial sand, n.e.c.....	1,623	1,622	5,773	¹ 838	¹ 835	¹ 2,480
Gravel, total.....	27,940	28,006	36,763	29,862	28,933	36,813
Run of pit or bank.....	3,178	3,536	3,472	4,664	4,639	4,165
Washed, screened, or otherwise prepared.....	24,762	24,470	33,291	25,198	24,294	32,648
Sand and gravel production and shipments, by State:						
Arkansas.....	6,707	6,531	7,990	6,388	6,039	6,439
Louisiana.....	14,428	14,880	17,998	13,463	13,431	16,465
Oklahoma.....	5,111	4,868	6,704	4,426	4,307	4,807
Texas:						
Sand and gravel, total.....						
Common sand, total.....	14,478	14,132	14,645	(NA)	27,804	32,632
Run of pit or bank.....	1,989	1,966	1,563	(NA)	(NA)	(NA)
Washed, screened, ground, or otherwise prepared.....	12,489	12,166	13,082	(NA)	(NA)	(NA)
Glass sand, molding sand, and industrial sand, n.e.c.....	474	473	1,864	(NA)	(NA)	(NA)
Gravel, total.....	15,807	15,758	21,017	(NA)	(NA)	(NA)
Run of pit or bank.....	1,550	1,910	2,139	(NA)	(NA)	(NA)
Washed, screened, or otherwise prepared.....	14,257	13,848	18,878	(NA)	(NA)	(NA)
Mountain:						
Sand and gravel production and shipments, total.....						
Common sand, total.....	12,411	11,548	13,359	¹ 12,076	¹ 9,797	¹ 10,220
Run of pit or bank.....	833	771	821	¹ 2,906	¹ 3,034	¹ 2,574
Washed, screened, ground, or otherwise prepared.....	11,578	10,777	12,538	¹ 9,170	¹ 6,763	¹ 7,646
Glass sand, molding sand, and industrial sand, n.e.c.....	305	302	1,264	¹ 429	¹ 419	¹ 791

See footnotes at end of table.

Table 3A.—PRIMARY PRODUCTS OF THE SAND AND GRAVEL INDUSTRY PRODUCED IN ALL INDUSTRIES BY GEOGRAPHIC AREAS: 1963 AND 1958—Continued

Product and geographic area	1963			1958		
	Total production	Total shipments (including interplant transfers) or receipts		Total production	Total shipments (including interplant transfers) or receipts	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
Mountain—Continued						
Gravel, total.....	31,108	29,471	31,613	47,035	44,363	30,893
Run of pit or bank.....	2,842	2,718	2,369	28,236	28,391	14,546
Washed, screened, or otherwise prepared.....	28,266	26,753	29,244	18,799	15,972	16,347
Sand and gravel production and shipments, by State:						
Montana.....	2,704	2,651	2,759	3,129	2,826	3,595
Idaho.....	1,721	1,604	2,060	3,827	3,441	3,600
Wyoming.....	2,222	2,087	2,085	1,715	1,588	1,265
Colorado.....	11,977	11,395	12,148	9,335	8,263	7,763
New Mexico.....	5,122	5,142	5,734	7,237	6,582	5,926
Arizona.....	10,598	9,539	11,580	6,028	3,972	4,233
Utah.....	5,915	5,820	5,491	26,603	26,189	13,327
Nevada.....	3,565	3,083	4,379	1,666	1,718	2,195
Pacific:						
Sand and gravel production and shipments, total.....	127,968	122,549	141,470	87,376	81,667	96,988
Common sand, total.....	50,073	47,940	50,161	¹ 38,288	¹ 34,666	¹ 38,788
Run of pit or bank.....	5,280	4,782	5,029	¹ 3,833	¹ 3,802	¹ 2,943
Washed, screened, ground, or otherwise prepared.....	44,793	43,158	45,132	¹ 34,455	¹ 30,864	¹ 35,845
Glass sand, molding sand, and industrial sand, n.e.c.....	1,361	1,351	5,911	¹ 1,195	¹ 1,174	¹ 3,921
Gravel, total.....	76,534	73,258	85,398	47,893	45,827	54,279
Run of pit or bank.....	8,619	7,956	8,210	4,269	4,378	4,001
Washed, screened, or otherwise prepared.....	67,915	65,302	77,188	43,624	41,449	50,278
Sand and gravel production and shipments, by State:						
Washington.....	12,942	11,498	12,239	12,220	10,314	9,682
Oregon.....	11,723	11,170	13,950	6,565	6,169	8,273
California:						
Sand and gravel, total.....	101,923	98,462	112,845	67,365	64,151	77,176
Common sand, total.....	42,433	40,888	42,320	¹ 29,802	¹ 27,977	¹ 31,281
Run of pit or bank.....	4,260	3,824	3,879	¹ 3,182	¹ 3,149	¹ 2,094
Washed, screened, ground, or otherwise prepared.....	38,173	37,064	38,441	¹ 26,620	¹ 24,828	¹ 29,187
Glass sand, molding sand, and industrial sand, n.e.c.....	1,151	1,141	5,351	¹ 1,167	¹ 1,147	¹ 3,772
Gravel, total.....	58,339	56,433	65,174	36,396	35,027	42,123
Run of pit or bank.....	5,823	5,555	5,734	2,990	3,051	2,763
Washed, screened, or otherwise prepared.....	52,516	50,878	59,440	33,406	31,976	39,360
Alaska and Hawaii sand and gravel production and shipments...	1,380	1,419	2,436	1,226	1,033	1,857

(NA) Not available.

(X) Not applicable.

¹Industrial sand, n.e.c., is included with common sand.²No sand or gravel production was reported in the District of Columbia in 1963.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR SAND AND GRAVEL SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product and year	Production	Unit value
All sand and gravel (net shipments).....1963...	143	112
.....1958...	123	109
Common sand and gravel (net shipments) ¹.....1963...	146	112
.....1958...	125	109
Common sand.....1963...	158	113
.....1958...	131	108
Common gravel.....1963...	138	111
.....1958...	121	110
Glass sand (net shipments).....1963...	134	122
.....1958...	125	106
Molding sand (net shipments).....1963...	100	133
.....1958...	103	121
Industrial sand, n.e.c. (net shipments) ¹.....1963...	119	139
.....1958...	92	113

¹For 1958 and 1954, data from the United States Department of the Interior, Bureau of Mines, were used to segregate industrial sand, n.e.c., from the census totals for this sand and common sand.

1963 CENSUS OF MINERAL INDUSTRIES

MIC83(P)-14D-1



INDUSTRY SERIES

Bentonite

SIC Code 1452

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Bentonite Industry shipped products valued at \$18.2 million, an increase of 8 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an

increase of 18 percent from 1958 to a total of 809 employees in 1963. Value added in mining amounted to \$11.5 million in 1963, a decrease of 6 percent from 1958.

The Bentonite Industry represents establishments engaged primarily in mining, milling, or otherwise preparing bentonite. Establishments engaged in preparing bentonite which do not include a mine are classified in the manufacturing industry 3295, Minerals and Earths, Ground or Otherwise Treated.

Table 1.--GENERAL STATISTICS FOR THE BENTONITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	44	41	43	¹ 29
With 20 employees or more.....	...do.....	16	15	16	(NA)
All employees:					
Number.....	Number.....	809	688	634	419
Payroll.....	Thousand dollars...	4,135	2,885	2,135	446
Production, development, and exploration workers:					
Number.....	Number.....	647	543	578	357
Man-hours.....	Thousand.....	1,512	1,140	1,340	687
Wages.....	Thousand dollars...	3,149	1,996	1,920	309
Value added in mining.....	...do.....	11,540	12,220	16,350	1,463
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	6,881	4,697	5,518	² 519
Contract work only.....	...do.....	1,361	1,181	1,829	38
Cost of purchased machinery installed.....	...do.....	1,139	1,009	604	(NA)
Value of shipments and receipts.....	...do.....	18,197	16,843	21,830	³ 1,982
Capital expenditures.....	...do.....	1,363	1,083	642	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	42	(NA)	36	7

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Bentonite Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Bentonite Industry amounted to \$18.2 million in 1963. Of this total, over 85 percent represented products primary to the Bentonite Industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. They indicate that the total net shipments of bentonite shipped by all mineral industries was valued at \$17.2 million in 1963. Of this, less than 2 percent was shipped by producers in industries other than Bentonite.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U. S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under

1963 CENSUS OF MINERAL INDUSTRIES

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authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently

amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.--GENERAL STATISTICS FOR THE BENTONITE INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total.....	44	16	809	4,135	647	1,512	3,149	11,540	6,881	1,139	18,197	1,363	688	12,220
West North Central and West South Central.....	8	4	246	1,234	170	429	737	3,473	1,448	210	4,826	305	345	4,580
East South Central...	9	3	172	580	149	316	462	2,588	859	350	3,385	412		
Mountain.....	17	7	296	1,588	244	591	1,298	4,643	4,273	266	8,876	306	343	7,640
Pacific.....	10	2	95	733	84	176	652	836	301	313	1,110	340		
California.....	7	2	93	727	82	172	646	843	287	298	1,093	335	65	871

Table 3.--PRIMARY PRODUCTS OF THE BENTONITE INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States:				
Crude bentonite prepared in the mineral industries ¹	1,874	(X)	1,309	(X)
Crude bentonite net shipments ²	241	1,207	396	1,394
Prepared bentonite shipped, including interplant transfers, total.....	(D)	(D)	1,343	21,813
Prepared in the mineral industries.....	1,404	16,010	³ 1,162	³ 15,111
Prepared in other industries.....	(D)	(D)	² 181	³ 6,702
West:				
Crude bentonite prepared in the mineral industries ¹	1,112	(X)	865	(X)
Crude bentonite net shipments ²	94	645	⁴ 236	⁴ 646
Prepared bentonite produced in the mineral industries.....	846	8,446	(NA)	(NA)
East and South:				
Crude bentonite prepared in the mineral industries ¹	762	(X)	444	(X)
Crude bentonite net shipments ²	147	562	(NA)	(NA)
Prepared bentonite produced in the mineral industries.....	558	7,564	(NA)	(NA)

(D) Withheld to avoid disclosing figures for individual companies. (NA) Not available. (X) Not applicable.

¹Represents material mined and prepared at the same establishment and material received from other establishments for preparation.

²Represents gross shipments less receipts from other establishments of crude materials for preparation.

³Figures for bentonite prepared in mineral industries other than the Bentonite Industry are included with figures for "Prepared in other industries."

⁴Represents gross shipments.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14D-2

INDUSTRY SERIES

Fire clay

SIC Code 1453

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Fire Clay Industry shipped products valued at \$17.2 million, a decrease of 8 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 26 percent from 1958 to a total of 1,093 employees in 1963. Value added in mining

Table 1.—GENERAL STATISTICS FOR THE FIRE CLAY INDUSTRY AND FOR FIRE CLAY MINES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954			1939 ¹		
		Total	Fire clay industry	Fire clay mines in manufactures	Total	Fire clay industry	Fire clay mines in manufactures	Total	Fire clay industry	Fire clay mines in manufactures	Total	Fire clay industry	Fire clay mines in manufactures
Establishments:													
Total.....	Number.....	291	153	138	317	182	135	353	248	105	² 306	² 196	² 110
With 20 employees or more.....	...do.....	30	15	15	28	19	9	(NA)	29	(NA)	(NA)	(NA)	(NA)
All employees:													
Number.....	Number.....	2,289	1,093	³ 1,196	2,278	1,473	³ 805	3,196	1,987	³ 1,209	3,910	2,317	1,593
Payroll.....	Thousand dollars...	10,320	4,749	³ 5,571	9,637	6,020	³ 3,617	10,711	6,598	³ 4,113	3,865	2,144	1,721
Production, development, and exploration workers:													
Number.....	Number.....	2,094	898	³ 1,196	2,084	1,279	³ 805	3,011	1,802	³ 1,209	3,655	2,135	1,520
Man-hours.....	Thousand.....	4,100	1,699	2,401	3,824	2,214	1,610	5,542	3,123	2,419	5,642	(NA)	(NA)
Wages.....	Thousand dollars...	9,442	3,810	5,632	8,606	4,989	3,617	9,783	5,670	4,113	3,366	1,817	1,549
Value added in mining.....	...do.....	30,638	12,682	17,956	25,848	14,540	11,308	24,335	17,468	6,867	6,168	3,411	2,757
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.	...do.....	10,176	4,697	5,479	7,508	4,478	3,030	7,519	4,773	2,746	⁴ 1,010	⁴ 678	⁴ 332
Contract work only.....	...do.....	(NA)	829	(NA)	(NA)	830	(NA)	(NA)	1,686	(NA)	(NA)	143	(NA)
Cost of purchased machinery installed.....	...do.....	(NA)	1,850	(NA)	(NA)	1,695	(NA)	(NA)	1,292	(NA)	(NA)	(NA)	(NA)
Value of shipments and receipts.....	...do.....	40,637	17,202	⁵ 23,435	32,944	18,606	⁵ 14,338	31,819	22,206	⁵ 9,613	⁶ 7,178	⁶ 4,089	⁶ 3,089
Quantity of fire clay shipped or used in making clay products.....	...do.....	8,337	3,633	4,704	8,447	4,000	4,447	8,394	4,405	3,989	4,101	(NA)	(NA)
Capital expenditures.....	...do.....	(NA)	2,027	(NA)	(NA)	2,107	(NA)	(NA)	1,327	(NA)	(NA)	(NA)	(NA)
Horsepower rating of power equipment	Thousand horsepower	(NA)	86	(NA)	(NA)	(NA)	(NA)	(NA)	100	(NA)	32	(NA)	(NA)

(NA) Not available.

¹Excludes data for 2 nonproducing establishments.

²Represents number of mines.

³For fire clay mines in manufactures, number of production, development, and exploration workers was estimated from reported figures for man-hours.

No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.

⁴Excludes cost of minerals received for preparation.

⁵Includes the estimated value of clay produced and used in the same establishment in manufacturing structural clay products, pottery, or other manufactured products.

⁶Represents net production and receipts.

April 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



amounted to \$12.7 million in 1963, a decrease of 13 percent from 1958.

The Fire Clay Industry represents establishments engaged primarily in mining, milling, or otherwise preparing fire clay, including stoneware clay and diaspore. For mines producing fire clay as part of an establishment manufacturing structural clay products, pottery, or other manufactured products, the entire establishment is classified in manufacturing. Such establishments produced about 56 percent of all fire clay in 1963.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results

from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Fire Clay Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. For the Fire Clay Industry, the total value of shipments and other receipts in 1963 was \$17.2 million of which about 95 percent represented products primary to the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. It indicates that the total value of shipments of crude and prepared fire clay in 1963 was \$19.5 million. Of this total, \$18.0 million, or 92 percent, represented shipments by the Fire Clay Industry. However, of the total tonnage of crude fire clay mined, only 41 percent was mined in the Fire Clay Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final

1963 CENSUS OF MINERAL INDUSTRIES

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industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United

States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE FIRE CLAY INDUSTRY AND FIRE CLAY MINES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
Fire clay industry and fire clay mines in manufactures, total	291	30	2,289	10,320	2,094	4,100	9,442	30,638	10,176	(NA)	40,637	(NA)	2,278	25,848
Fire clay industry..	153	15	1,093	4,749	898	1,699	3,810	12,682	4,697	1,850	17,202	2,027	1,473	14,540
Fire clay mines in manufactures.....	138	15	¹ 1,196	¹ 5,571	¹ 1,196	2,401	5,632	17,956	5,479	(NA)	² 23,435	(NA)	¹ 805	11,308
Middle Atlantic, total....	68	5	485	2,135	458	866	2,025	7,789	1,894	(NA)	9,814	(NA)	646	6,622
Fire clay industry....	45	3	289	1,195	262	477	1,085	3,522	1,139	571	4,792	440	457	3,603
Fire clay mines in manufactures.....	23	2	¹ 196	¹ 940	¹ 196	389	940	4,267	755	(NA)	² 5,022	(NA)	¹ 189	3,019
New Jersey:														
Fire clay industry....	7	-	51	198	47	85	173	490	109	28	575	52	120	651
Pennsylvania:														
Fire clay industry....	38	3	238	997	215	392	912	3,032	1,030	543	4,217	388	337	2,952
East North Central, total.	78	13	833	4,356	772	1,532	3,779	10,611	3,176	(NA)	13,690	(NA)	650	7,428
Fire clay industry....	35	8	411	2,189	350	689	1,612	4,016	1,160	428	5,079	525	262	3,866
Fire clay mines in manufactures.....	43	5	¹ 422	¹ 2,167	¹ 422	843	2,167	6,595	2,016	(NA)	² 8,611	(NA)	¹ 368	3,562
Ohio, total.....	62	11	655	3,471	605	1,193	2,942	8,687	2,317	(NA)	11,022	(NA)	538	6,291
Fire clay industry....	26	7	339	1,839	289	567	1,310	3,241	748	376	4,007	358	242	3,422
Fire clay mines in manufactures.....	36	4	¹ 316	¹ 1,632	¹ 316	626	1,632	5,446	1,569	(NA)	² 7,015	(NA)	¹ 296	2,869
Illinois.....	10	2	¹ 139	¹ 665	¹ 132	265	639	1,656	652	(NA)	² 2,206	(NA)	¹ 81	686
West North Central, total.	57	1	335	1,127	248	472	1,029	4,508	1,423	(NA)	5,838	(NA)	337	4,946
Fire clay industry....	25	1	184	469	97	172	371	2,481	634	103	3,022	196	303	3,894
Fire clay mines in manufactures.....	32	-	¹ 151	¹ 658	¹ 151	300	658	2,027	789	(NA)	² 2,816	(NA)	34	1,052
Missouri.....	50	1	301	989	214	412	891	4,204	1,289	(NA)	5,401	(NA)	318	4,424
South Atlantic.....	8	1	60	417	60	121	367	1,669	263	(NA)	1,928	(NA)	134	800
East South Central, total.	21	4	153	571	140	265	496	1,860	1,369	(NA)	3,163	(NA)	322	2,469
Fire clay industry....	18	3	117	429	104	194	354	1,506	1,214	493	2,654	559	296	1,711
Fire clay mines in manufactures.....	3	1	¹ 36	¹ 142	¹ 36	71	142	354	155	(NA)	² 509	(NA)	26	758
Kentucky:														
Fire clay industry....	8	1	35	152	29	48	123	451	376	5	779	53	231	1,450
Alabama:														
Fire clay industry....	7	2	74	258	68	133	213	1,052	827	488	1,863	504	(NA)	(NA)
West South Central.....	22	4	240	999	240	492	999	2,196	1,094	(NA)	3,280	(NA)	66	1,720
Fire clay mines in manufactures.....	15	4	¹ 229	¹ 954	¹ 229	472	954	2,126	1,043	(NA)	¹ 3,169	(NA)	(NA)	(NA)
Mountain.....	22	-	58	232	56	108	222	564	266	(NA)	792	(NA)	53	778
Colorado.....	19	-	54	220	52	100	210	536	254	(NA)	753	(NA)	(NA)	(NA)
Pacific, total.....	15	2	125	483	120	244	525	1,441	691	(NA)	2,132	(NA)	70	1,085
Fire clay industry (California).....	6	-	43	221	38	81	202	702	325	218	1,027	218	(NA)	(NA)
Fire clay mines in manufactures.....	9	2	¹ 82	¹ 262	¹ 82	163	323	739	366	(NA)	² 1,105	(NA)	(NA)	(NA)

- Represents zero. (NA) Not available.

¹See table 1, footnote 3.

²See table 1, footnote 5.

1963 CENSUS OF MINERAL INDUSTRIES

Table 3.--PRIMARY PRODUCTS OF THE FIRE CLAY INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States:				
Crude fire clay mined and used or shipped, total.....	8,430	(X)	8,724	(X)
Mined and used in the same establishment:				
In making clay products.....	4,571	(X)	4,343	(X)
In making prepared clay.....	681	(X)	864	(X)
Received in the fire clay industry from other establishments for preparation...	32	69	42	176
Shipments including interplant transfers.....	3,178	13,684	3,517	13,389
Prepared fire clay shipments including interplant transfers.....	1,069	5,817	1,033	6,070
Middle Atlantic:				
Crude fire clay, total.....	1,633	(X)	1,631	(X)
Mined and used in the same establishment:				
In making clay products.....	697	(X)	797	(X)
In making prepared clay.....	105	(X)	122	(X)
Shipments including interplant transfers.....	831	4,015	712	3,232
Prepared fire clay shipments including interplant transfers.....	198	1,217	217	1,423
Pennsylvania:				
Crude fire clay, total.....	1,519	(X)	1,520	(X)
Mined and used in the same establishment:				
In making clay products.....	671	(X)	748	(X)
In making prepared clay.....	97	(X)	74	(X)
Shipments including interplant transfers.....	751	3,384	698	3,135
Prepared fire clay shipments including interplant transfers.....	172	925	174	932
North Central:				
Crude fire clay, total.....	4,122	(X)	4,552	(X)
Mined and used at the same establishment:				
In making clay products.....	2,046	(X)	2,142	(X)
In making prepared clay.....	319	(X)	553	(X)
Shipments including interplant transfers.....	1,757	7,159	1,857	6,643
Prepared fire clay shipments including interplant transfers.....	508	2,486	597	3,526
East North Central:				
Crude fire clay.....	3,072	(X)	3,087	(X)
Crude and prepared fire clay shipments including interplant transfers.....	1,638	5,982	1,305	5,139
Ohio:				
Crude fire clay.....	2,293	(X)	2,363	(X)
Crude and prepared fire clay shipments including interplant transfers.....	1,169	4,335	1,005	4,453
West North Central:				
Crude fire clay.....	1,050	(X)	1,465	(X)
Crude and prepared fire clay shipments including interplant transfers.....	627	3,663	1,149	5,030
Missouri:				
Crude fire clay.....	854	(X)	1,298	(X)
South:				
Crude fire clay, total.....	1,868	(X)	1,498	(X)
Mined and used in the same establishment:				
In making clay products.....	1,402	(X)	902	(X)
In making prepared clay.....	254	(X)	170	(X)
Shipments including interplant transfers.....	212	1,085	426	2,386
Prepared fire clay shipments including interplant transfers.....	269	1,719	170	625
South Atlantic:				
Crude fire clay.....	271	(X)	431	(X)
East South Central:				
Crude fire clay.....	600	(X)	519	(X)
Kentucky:				
Crude fire clay, total.....	170	(X)	323	(X)
Mined and used in the same establishment in making clay products.....	21	(X)	30	(X)
Shipments including interplant transfers.....	149	736	293	1,950
West South Central:				
Crude fire clay.....	997	(X)	548	(X)
West:				
Crude fire clay, total.....	807	(X)	1,043	(X)
Mined and used in the same establishment:				
In making clay products.....	426	(X)	502	(X)
In making prepared clay.....	3	(X)	19	(X)
Shipments including interplant transfers.....	378	1,425	522	1,128
Prepared fire clay shipments including interplant transfers.....	94	395	49	496
Mountain:				
Crude fire clay.....	210	(X)	325	(X)
Crude and prepared fire clay shipments including interplant transfers.....	160	666	191	573
Pacific:				
Crude fire clay.....	597	(X)	718	(X)
Crude and prepared fire clay shipments including interplant transfers.....	312	1,154	380	1,051

(X) Not applicable.

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14D-3

INDUSTRY SERIES

Fuller's earth

SIC Code 1454

preliminary report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Fuller's Earth Industry shipped products valued at \$13.1 million, an increase of 51 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an increase of 18 percent from 1958 to a total of 769 employees in 1963. Value added in

mining amounted to \$9.2 million in 1963, an increase of 55 percent from 1958.

The Fuller's Earth Industry represents establishments engaged primarily in mining, milling, or otherwise preparing fuller's earth.

This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

Table 1.--GENERAL STATISTICS FOR THE FULLER'S EARTH INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	15	14	16	¹ 22
With 20 employees or more.....	...do.....	9	6	6	(NA)
All employees:					
Number.....	Number.....	769	652	564	678
Payroll.....	Thousand dollars...	3,096	2,399	1,744	746
Production, development, and exploration workers:					
Number.....	Number.....	664	527	510	562
Man-hours.....	Thousand.....	1,386	1,145	1,109	1,051
Wages.....	Thousand dollars...	2,443	1,673	1,381	438
Value added in mining.....	...do.....	9,241	5,955	4,179	1,402
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	4,230	3,053	1,819	² 705
Contract work only.....	...do.....	367	281	223	72
Cost of purchased machinery installed.....	...do.....	801	263	539	(NA)
Value of shipments and receipts.....	...do.....	13,083	8,692	6,012	³ 2,107
Capital expenditures.....	...do.....	1,189	579	525	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	35	(NA)	23	15

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

March 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers from one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Fuller's Earth Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products

purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Fuller's Earth Industry in 1963 amounted to \$13.1 million. Of this total, \$2.7 million was for secondary products and miscellaneous receipts. The industry shipments of primary products represented 79 percent of the total value of shipments and receipts.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. In 1963, however, the total value of shipments of primary products of the industry was \$10.4 million, all of which was produced in the Fuller's Earth Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

3

Table 2.--GENERAL STATISTICS FOR THE FULLER'S EARTH INDUSTRY BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total....	15	9	769	3,096	664	1,386	2,443	9,241	4,230	801	13,083	1,189	652	5,955
South Atlantic.....	8	8	723	2,922	624	1,308	2,301	8,748	4,103	801	12,494	1,158	594	5,482
South Central and West.....	7	1	46	174	40	78	142	493	127	-	589	31	58	473

- Represents zero.

Table 3.--PRIMARY PRODUCTS OF THE FULLER'S EARTH INDUSTRY PRODUCED IN ALL INDUSTRIES BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States:				
Crude fuller's earth prepared ¹	777	(X)	468	(X)
Net shipments of fuller's earth ²	462	10,356	285	6,778
South Atlantic:				
Crude fuller's earth prepared ¹	708	(X)	380	(X)
Net shipments of fuller's earth ²	417	9,692	245	(D)

(D) Withheld to avoid disclosure of figures for individual companies.

(X) Not applicable.

¹Represents material mined and prepared at the same establishment and, for 1958, material received from other establishments for preparation.²Represents gross shipments less, for 1958, receipts from other establishments of crude materials for preparation. There were no such receipts in 1963.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233

OFFICIAL BUSINESS

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14D-4

INDUSTRY SERIES

Kaolin and ball clay

SIC Code 1455

preliminary report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Kaolin and Ball Clay Industry shipped products valued at \$65.8 million, an increase of 55 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed an increase of less than 1 percent from 1958 to a total of 3.4 thousand employees in 1963. Value added in mining amounted to \$49.9 million in 1963, an increase of 61 percent from 1958.

The Kaolin and Ball Clay Industry represents establishments engaged primarily in mining, milling, or otherwise preparing kaolin or ball clay, including china clay, paper clay, and slip clay. Establishments engaged in preparing such clays which do not include a mine are classified in the manufacturing Industry 3295, Minerals and Earths, Ground or Otherwise Treated.

Table 1.—GENERAL STATISTICS FOR THE KAOLIN AND BALL CLAY INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	47	53	54	¹ 95
With 20 employees or more.....	...do.....	27	26	28	(NA)
All employees:					
Number.....	Number.....	3,398	3,394	3,148	3,434
Payroll.....	Thousand dollars...	18,253	14,014	9,943	2,467
Production, development, and exploration workers:					
Number.....	Number.....	2,888	2,722	2,820	3,168
Man-hours.....	Thousand.....	6,045	5,675	6,159	5,987
Wages.....	Thousand dollars...	14,298	9,719	8,115	1,830
Value added in mining.....	...do.....	49,938	30,990	25,249	5,437
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	17,632	12,682	8,333	² 1,802
Contract work only.....	...do.....	562	592	1,362	135
Cost of purchased machinery installed.....	...do.....	3,429	2,913	2,601	(NA)
Value of shipments and receipts.....	...do.....	65,807	42,434	31,892	³ 7,239
Capital expenditures.....	...do.....	5,192	4,151	4,291	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	176	(NA)	97	33

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

April 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports, if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from year to year.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Kaolin and Ball Clay Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, the total value of shipments and other receipts of establishments classified in the Kaolin and Ball Clay Industry amounted to \$65.8 million in 1963. Of this total, less than \$1 million represented products primary to other industries and receipts for miscellaneous activities.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. The total net shipments of crude and prepared kaolin and ball clay by all industries was valued at \$68 million in 1963. Of this, less than 5 percent represented shipments by producers in other industries.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State are being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly

1963 CENSUS OF MINERAL INDUSTRIES

with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be

conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE KAOLIN AND BALL CLAY INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	47	27	3,398	18,253	2,888	6,045	14,298	49,938	17,632	3,429	65,807	5,192	3,394	30,990
Northeast, North Central, and South Atlantic...	29	18	2,879	15,688	2,428	5,082	12,226	42,652	15,336	3,093	56,376	4,705	2,935	25,148
South Carolina...	5	5	385	1,786	350	736	1,441	4,222	2,261	327	6,273	537	389	3,152
Georgia.....	17	11	2,304	12,705	1,984	4,152	10,373	37,141	12,710	2,732	48,799	3,784	2,157	20,963
South Central.....	10	7	360	1,657	308	669	1,203	5,861	1,996	324	7,736	445	359	4,503
Tennessee.....	5	4	225	1,052	191	405	784	3,622	1,107	255	4,780	204	222	2,916
West.....	8	2	159	908	152	294	869	1,425	300	12	1,695	42	100	1,339

Table 3.--PRIMARY PRODUCTS OF THE KAOLIN AND BALL CLAY INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States:				
Crude kaolin and ball clay:				
Prepared in the mineral industries ¹	4,923	(X)	2,730	(X)
Net shipments ²	331	2,373	314	3,066
Prepared kaolin and ball clay shipped, including inter- plant transfers.....	3,269	65,223	2,311	44,598
South Atlantic:				
South Carolina:				
Crude kaolin and ball clay:				
Prepared in the mineral industries ¹	525	(X)	364	(X)
Net shipments ²	-	-	-	-
Prepared kaolin and ball clay shipped, including interplant transfers.....	445	6,212	344	4,607
Georgia:				
Crude kaolin and ball clay:				
Prepared in the mineral industries ¹	3,718	(X)	1,919	(X)
Net shipments ²			145	855
Prepared kaolin and ball clay shipped, including interplant transfers.....	2,362	50,524	1,533	27,888
South Central:				
Crude kaolin and ball clay:				
Prepared in the mineral industries ¹	589	(X)	369	(X)
Net shipments ²			73	655
Prepared kaolin and ball clay shipped, including interplant transfers.....	584	7,687	330	4,868
Tennessee:				
Crude kaolin and ball clay:				
Prepared in the mineral industries ¹	312	(X)	204	(X)
Net shipments ²				(D)
Prepared kaolin and ball clay shipped, including interplant transfers.....	321	4,731	244	2,873

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Represents material mined and prepared at the same establishment and material received from other establishments for preparation.

²Represents gross shipments less receipts from other establishments of crude materials for preparation.

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OFFICIAL BUSINESS

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14D-5



INDUSTRY SERIES

Feldspar

SIC Code 1456

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Feldspar Industry shipped products valued at \$8.5 million, an increase of 23 percent over 1958, according to preliminary results obtained from the 1963 census.

Average employment in this industry showed a decrease of 18 percent from 1958 to a total of 466 employees in 1963. Value added in mining amounted to \$6.1 million in 1963, an increase of 35 percent from 1958.

The Feldspar Industry includes establishments engaged primarily in mining, milling, grinding, or otherwise preparing feldspar. Establishments engaged in grinding feldspar which do not include a mine are classified in the manufacturing Industry 3295, Minerals and Earths, Ground or Otherwise Treated.

Table 1.—GENERAL STATISTICS FOR THE FELDSPAR INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	31	74	84	¹ 59
With 20 employees or more.....	...do.....	10	10	10	(NA)
All employees:					
Number.....	Number.....	466	567	616	566
Payroll.....	Thousand dollars...	2,001	1,919	1,722	496
Production, development, and exploration workers:					
Number.....	Number.....	394	496	579	512
Man-hours.....	Thousand.....	850	1,028	1,235	1,016
Wages.....	Thousand dollars...	1,750	1,515	1,523	383
Value added in mining.....	...do.....	6,099	4,531	4,048	859
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	3,326	2,387	2,735	² 122
Cost of purchased machinery installed.....	...do.....	732	1,277	294	(NA)
Value of shipments and receipts.....	...do.....	8,459	6,889	6,669	³ 981
Capital expenditures.....	...do.....	1,698	1,306	408	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	38	(NA)	30	6

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net shipments and receipts.

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, warehouses, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Feldspar Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Feldspar Industry amounted to \$8.5 million in 1963. Of this total, about \$0.8 million was for secondary products and receipts for miscellaneous activities. The industry shipments of primary products represented 90 percent of the total value of shipments and receipts.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. In 1963, the total value of shipments of primary products of the industry was \$8.3 million. Of this total, only \$0.6 million, or 7 percent, were shipped by establishments classified in industries other than Feldspar.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State are being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

1963 CENSUS OF MINERAL INDUSTRIES

3

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, this census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services,

under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE FELDSPAR INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery in installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total.....	31	10	466	2,001	394	850	1,750	6,099	3,326	732	8,459	1,698	567	4,531
South.....	10	6	280	1,104	242	531	996	3,960	2,196	414	5,250	1,320	399	2,657

Table 3.—PRIMARY PRODUCTS OF THE FELDSPAR INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity	Value	Quantity	Value
	(1,000 short tons)	(\$1,000)	(1,000 short tons)	(\$1,000)
United States:				
Crude feldspar:				
Produced.....	1,052	(X)	506	(X)
Mined and prepared in the same establishment.....	¹ 1,035	(X)	377	(X)
Received in the feldspar industry from other establishments for preparation.....	(¹)	(D)	56	456
Shipments, including interplant transfers.....	25	130	120	866
Prepared feldspar, including interplant transfers, total.....	593	8,130	465	6,608
Shipped in the feldspar industry.....	562	7,554	² 382	² 5,422
Shipped in the other industries.....	31	576	³ 83	³ 1,186
South:				
Crude feldspar:				
Produced.....	602	(X)	305	(X)
Prepared.....	602	(X)	289	(X)
Prepared feldspar shipped, including interplant transfers.....	401	5,415	292	4,149

(D) Withheld to avoid disclosing figures for individual companies. (X) Not applicable.

¹Feldspar received from other establishments for preparation is included with feldspar mined and prepared in the same establishment.

²Represents shipments by all mineral industries.

³Represents shipments by the manufacturing industries only.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14D-6

INDUSTRY SERIES

preliminary
report

Miscellaneous clays and related products

SIC Code 1459

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Clay and Related Minerals, N.E.C., Industry shipped products valued at \$38.2 million, an increase of 31 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 4 percent from 1958 to a total of 1,929 employees in 1963. Value added

Table 1.—GENERAL STATISTICS FOR THE CLAY AND RELATED MINERALS, N.E.C., INDUSTRY AND MISCELLANEOUS CLAYS MINES IN MANUFACTURES IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963			1958			1954			1939		
		Total	Clay and related minerals n.e.c., industry	Miscellaneous clays mines in manufactures	Total	Clay and related minerals n.e.c., industry	Miscellaneous clays mines in manufactures	Total	Clay and related minerals n.e.c., industry	Miscellaneous clays mines in manufactures	Total	Clay and related minerals n.e.c., industry	Miscellaneous clays mines in manufactures
Establishments:													
Total.....	Number.....	647	128	519	703	126	577	805	187	3618 (NA)	3621 (NA)	3771 (NA)	3550 (NA)
With 20 employees or more.....	...do.....	44	34	10	44	36	8	(NA)	22	(NA)	(NA)	(NA)	(NA)
All employees:													
Number.....	Number.....	3,849	1,929	1,920	3,768	1,999	1,769	3,883	1,283	42,600	3,294	719	2,575
Payroll.....	1,000 dollars.....	18,713	10,603	8,110	15,974	8,920	7,054	12,424	4,362	48,062	3,310	813	2,497
Production, development, and exploration workers:													
Number.....	Number.....	3,639	1,719	1,920	3,500	1,731	1,769	3,774	1,174	42,600	3,205	677	2,528
Man-hours.....	Thousand... 1,000	7,365	3,550	3,815	7,232	3,695	3,537	7,612	2,411	5,201	6,083	(NA)	(NA)
Wages.....	dollars....	16,542	8,432	8,110	14,042	6,988	7,054	11,943	3,881	8,062	3,161	739	2,422
Value added in mining.....	...do.....	52,646	24,181	28,465	49,410	19,132	30,278	30,481	11,155	19,326	6,413	2,039	4,374
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	22,791	14,918	7,873	18,169	11,926	6,243	10,903	4,695	6,208	1,464	302	1,162
Contract work only.....	...do.....	(NA)	1,374	(NA)	(NA)	824	(NA)	(NA)	1,190	(NA)	110	23	87
Cost of purchased machinery installed.....	...do.....	(NA)	2,277	(NA)	(NA)	2,187	(NA)	(NA)	1,178	(NA)	(NA)	(NA)	(NA)
Value of shipments and receipts.....	...do.....	74,585	38,247	63,338	65,795	29,274	63,521	40,693	15,159	625,534	77,877	72,341	75,536
Quantity of miscellaneous clay and related products shipped or used in making clay products.....	1,000 short tons	37,066	7,944	29,122	30,204	4,972	25,232	30,227	4,173	26,054	16,223	(NA)	(NA)
Capital expenditures.....	...do.....	(NA)	3,129	(NA)	(NA)	3,971	(NA)	(NA)	1,869	(NA)	(NA)	(NA)	(NA)
Horsepower rating of power equipment	1,000 hp...	(NA)	106	(NA)	(NA)	(NA)	(NA)	(NA)	74	(NA)	65	(NA)	(NA)

(NA) Not available.

¹Excludes data for one establishment in Hawaii with 0-4 employees.

²For 1954, and possibly for earlier years, excludes data for calcining operations associated with magnesite and brucite mines. The quantity of products figure for 1954, and possibly for earlier years, represents shipments of crude material and transfers of crude or crushed and ground material to associated calcining plants.

³Represents number of mines.

⁴For miscellaneous clays mines in manufactures, number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations, hence, the same figures are shown for production, development, and exploration workers and for all employees.

⁵Excludes cost of minerals received for preparation.

⁶Includes the estimated value of clay produced and used in the same establishment in manufacturing cement, structural clay products, and pottery products.

⁷Represents the value of net production and receipts.

June 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



in mining amounted to \$24.2 million in 1963, an increase of 26 percent from 1958.

The Clay, Ceramic, and Refractory Minerals, N.E.C., (Miscellaneous Clays and Related Products) Industry represents establishments engaged primarily in mining, milling, or otherwise preparing ceramic or refractory minerals, not elsewhere classified, such as common clay and shale, andalusite, apatite, brucite, dumortierite, kyanite, magnesite, olivine, pinite, sillimanite, and topaz (non-gem). Establishments producing common clay and shale in conjunction with the manufacture of structural clay products are classified in Major Group 32, Stone, Clay, and Glass Products. Such combination mining and manufacturing establishments produced about 78 percent of all common clay and shale in 1963.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Clay and Related Minerals, N.E.C., Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. For the Clay and Related Minerals, N.E.C., Industry, the total value of shipments and other receipts in 1963 was \$38.2 million of which \$36.8 million represented products primary to the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. It indicates that the total value of shipments of crude and prepared common clay and shale in 1963 was \$30.3 million of which \$26.6 million was shipped by the Clay and Related Minerals, N.E.C., Industry. In addition, there were shipments of apatite, kyanite, magnesite, and olivine valued at \$12.7 million, all of which were shipped by that industry. However, the Clay and Related Minerals, N.E.C., Industry produced only 21 percent of all of the primary products assigned to it, most of the remainder being produced and used in the same manufacturing establishment.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishment," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may

be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

Table 2.—GENERAL STATISTICS FOR THE CLAY AND RELATED MINERALS, N.E.C., INDUSTRY AND MISCELLANEOUS CLAYS MINES IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
Clay and related minerals, n.e.c., industry and miscellaneous clays mines in manufactures, total.....	647	44	3,849	18,713	3,639	7,365	16,542	52,646	22,791	(NA)	74,585	(NA)	13,768	149,410
Clay and related minerals, n.e.c., industry.....	128	34	1,929	10,603	1,719	3,550	8,432	24,181	14,918	2,277	38,247	3,129	1,999	19,132
Miscellaneous clays mines in manufactures.....	519	10	2,190	28,110	2,190	3,815	8,110	28,465	7,873	(NA)	36,338	(NA)	12,769	130,278
New England.....	16	-	237	2,152	237	76	152	460	229	(NA)	3,678	(NA)	235	578
Middle Atlantic.....	64	6	2,464	22,520	2,443	928	2,343	6,446	2,855	(NA)	39,105	(NA)	2,361	5,135
New York, total.....	20	3	191	1,219	178	405	1,082	1,931	1,569	(NA)	3,355	(NA)	136	1,765
Clay and related minerals, n.e.c., industry.....	4	2	84	701	71	190	564	577	1,167	99	1,599	244	(NA)	(NA)
Miscellaneous clays mines in manufactures.....	16	1	2,107	25,18	2,107	215	518	1,354	402	(NA)	21,756	(NA)	(NA)	(NA)
Pennsylvania.....	34	3	2,244	21,163	2,237	463	1,125	4,067	1,186	(NA)	35,209	(NA)	2,137	2,471
East North Central, total	134	6	628	3,080	639	1,273	2,970	10,165	3,665	(NA)	13,989	(NA)	667	3,206
Clay and related minerals, n.e.c., industry.....	12	6	251	1,500	262	555	1,390	3,485	2,182	539	5,826	380	230	1,346
Miscellaneous clays mines in manufactures.....	122	-	2,377	21,580	2,377	718	1,580	6,680	1,483	(NA)	38,163	(NA)	2,437	6,360
Ohio.....	53	1	2,194	29,07	2,192	397	886	3,160	921	(NA)	34,058	(NA)	2,253	3,224
Indiana.....	24	2	2,95	2,492	2,117	191	449	1,879	595	(NA)	32,451	(NA)	2,111	1,121
Illinois, total.....	38	2	245	1,166	236	500	1,120	3,203	1,154	(NA)	4,562	(NA)	225	2,360
Clay and related minerals, n.e.c., industry.....	7	2	137	753	128	299	707	1,676	796	409	2,677	204	116	758
Miscellaneous clays mines in manufactures.....	31	-	2,108	2,413	2,108	201	413	1,527	358	(NA)	31,885	(NA)	2,109	1,602
Michigan.....	14	1	285	2,484	285	169	484	1,810	968	(NA)	32,778	(NA)	(NA)	(NA)
West North Central, total	68	3	274	1,321	255	520	1,170	3,384	1,602	(NA)	4,899	(NA)	305	3,379
Clay and related minerals, n.e.c., industry.....	13	3	130	655	111	232	504	1,344	922	214	2,179	301	147	1,147
Miscellaneous clays mines in manufactures.....	55	-	2,144	2,666	2,144	288	666	2,040	680	(NA)	32,720	(NA)	2,158	2,232
Iowa.....	27	1	2,93	2,420	2,90	187	402	931	588	(NA)	31,523	(NA)	263	871
Missouri.....	19	1	268	2,330	246	120	300	918	419	(NA)	31,333	(NA)	2,104	991
Kansas.....	19	1	278	2,402	271	155	339	1,047	382	(NA)	31,342	(NA)	259	1,039
South Atlantic, total....	110	9	743	3,100	708	1,367	2,576	9,174	3,706	(NA)	12,621	(NA)	806	10,920
Clay and related minerals, n.e.c., industry.....	16	9	448	1,979	413	793	1,455	4,304	2,738	721	6,783	980	493	4,493
Miscellaneous clays mines in manufactures.....	94	-	2,295	21,121	2,295	574	1,121	4,870	968	(NA)	35,838	(NA)	2,313	6,427
Maryland.....	8	-	222	294	222	42	94	570	108	(NA)	3,678	(NA)	(NA)	(NA)
Virginia, total.....	25	4	244	1,126	201	427	830	3,173	1,397	(NA)	4,338	(NA)	329	3,295
Clay and related minerals, n.e.c., industry.....	6	4	179	855	136	297	559	1,928	1,143	56	2,839	288	273	2,185
Miscellaneous clays mines in manufactures.....	19	-	265	2,271	265	130	271	1,245	254	(NA)	31,499	(NA)	256	1,110
North Carolina, total..	39	1	166	880	161	310	88	1,911	991	(NA)	2,497	(NA)	218	3,400
Clay and related minerals, n.e.c., industry.....	5	1	58	214	53	101	192	482	273	562	710	607	(NA)	(NA)
Miscellaneous clays mines in manufactures.....	34	-	2,108	2,366	2,108	209	366	1,469	318	(NA)	31,787	(NA)	(NA)	(NA)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

5

Table 1.—GENERAL STATISTICS FOR THE CLAY AND RELATED MINERALS, N.E.C., INDUSTRY AND MISCELLANEOUS CLAYS MINES IN MANUFACTURES, BY GEOGRAPHIC AREA:
1963 AND 1958—Continued

Industry and geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
South Atlantic—Con.														
South Carolina.....	17	1	² 99	² 438	² 90	228	364	1,321	575	(NA)	³ 1,896	(NA)	² 105	1,133
Georgia.....	16	1	² 135	² 587	² 128	254	523	1,316	514	(NA)	³ 1,848	(NA)	² 142	2,011
East South Central, total	65	6	317	1,302	297	592	1,122	3,726	1,688	(NA)	5,362	(NA)	305	7,401
Clay and related minerals, n.e.c., industry.....	13	4	121	602	101	229	422	1,411	957	106	2,316	158	149	922
Miscellaneous clays mines in manufactures.....	52	2	² 196	² 700	² 196	364	700	2,315	731	(NA)	³ 3,046	(NA)	² 156	6,479
Tennessee.....	10	2	² 74	² 346	² 60	136	259	786	638	(NA)	³ 1,404	(NA)	² 103	1,746
Alabama.....	23	1	² 96	² 316	² 96	183	316	986	296	(NA)	³ 1,281	(NA)	² 123	3,343
West South Central, total	99	4	481	2,376	454	1,038	2,141	5,842	3,101	(NA)	8,824	(NA)	582	3,703
Clay and related minerals, n.e.c., industry.....	23	4	243	1,297	216	509	1,062	3,093	1,821	197	4,795	316	341	2,198
Miscellaneous clays mines in manufactures.....	76	-	² 238	² 1,079	² 238	529	1,079	2,749	1,280	(NA)	³ 4,029	(NA)	² 241	1,505
Arkansas.....	13	-	² 43	² 206	² 43	64	206	424	167	(NA)	³ 584	(NA)	² 137	109
Louisiana.....	11	1	² 80	² 507	² 74	171	439	931	511	(NA)	³ 1,512	(NA)	² 92	840
Oklahoma.....	16	-	² 71	² 326	² 70	150	326	1,041	438	(NA)	³ 1,397	(NA)	² 62	427
Texas, total.....	59	3	287	1,337	267	653	1,170	3,446	1,985	(NA)	5,331	(NA)	291	2,327
Clay and related minerals, n.e.c., industry.....	15	3	151	736	131	301	569	1,871	1,282	78	3,053	178	139	1,345
Miscellaneous clays mines in manufactures.....	44	-	² 136	² 601	² 136	352	601	1,575	703	(NA)	³ 2,278	(NA)	² 152	982
Mountain, total.....	41	3	385	2,244	329	648	1,808	5,931	3,107	(NA)	8,947	(NA)	137	1,904
Clay and related minerals, n.e.c., industry.....	23	3	351	2,131	295	585	1,695	5,492	2,978	174	8,379	265	⁴ 98	⁴ 659
Miscellaneous clays mines in manufactures.....	18	-	² 34	² 113	² 34	63	113	439	129	(NA)	³ 568	(NA)	² 39	1,245
Colorado.....	12	1	² 83	² 444	² 70	147	359	897	537	(NA)	³ 1,428	(NA)	(NA)	(NA)
Pacific, total.....	50	7	520	2,618	477	922	2,260	7,518	2,838	(NA)	10,160	(NA)	² 232	² 2,206
Clay and related minerals, n.e.c., industry.....	19	3	256	1,570	213	397	1,212	4,002	1,917	223	5,723	419	² 105	² 1,180
Miscellaneous clays mines in manufactures.....	31	4	² 264	² 1,048	² 264	525	1,048	3,516	921	(NA)	³ 4,437	(NA)	¹ ² 127	¹ 1,026
California, total.....	32	6	351	1,692	336	683	1,576	4,786	1,782	(NA)	6,502	(NA)	165	1,723
Clay and related minerals, n.e.c., industry.....	11	2	98	675	83	175	559	1,400	885	113	2,219	179	⁶ 82	⁶ 836
Miscellaneous clays mines in manufactures.....	21	4	² 253	² 1,017	² 253	508	1,017	3,386	897	(NA)	³ 4,283	(NA)	² 83	887

- Represents zero. (NA) Not available.

¹Excludes data for one miscellaneous clays mine in manufactures in Hawaii with 0-4 employees.²See table 1 footnote 4.³See table 1 footnote 6.⁴Excludes data for two magnesite or brucite establishments with employment in the range 100-249.⁵Excludes data for two magnesite or brucite establishments with employment in the range 100-253.⁶Excludes data for one magnesite or brucite establishment with employment in the range 0-4.

Table 3.—PRIMARY PRODUCTS OF THE CLAY AND RELATED MINERALS, N.E.C., INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States:				
Crude common clay and shale, total.....	37,101	(X)	31,683	(X)
Mined and used in the same establishment:				
In making cement and clay products ¹	28,880	(X)	24,821	(X)
In making prepared clay.....	5,892	(X)	4,818	(X)
Shipments, including interplant transfers.....	2,329	3,650	2,044	3,034
Prepared common clay and shale shipments, including interplant transfers, total.....	4,661	26,632	3,649	28,191
Prepared in the clay and related minerals, n.e.c., industry.....	4,629	22,976	3,339	18,808
Prepared in other industries.....	32	3,656	310	9,383
Aplite and kyanite:				
Mined and used in the same establishment in making prepared materials....	553	(X)	327	(X)
Shipments, including interplant transfers, crude and prepared.....	204	4,021	225	2,601
Magnesite and olivine: ²				
Mined and used in the same establishment in making prepared materials....	554	(X)	512	(X)
Shipments, including interplant transfers, crude and prepared.....	198	8,694	163	7,695
New England: ³				
Crude common clay and shale.....	462	(X)	389	(X)
Middle Atlantic:				
Crude common clay and shale.....	3,474	(X)	3,460	(X)
Shipments, including interplant transfers.....	231	482	190	316
Prepared common clay and shale shipments, including interplant transfers.....	3,482	3,295	216	1,042
New York:				
Crude common clay and shale.....	1,486	(X)	1,079	(X)
Pennsylvania:				
Crude common clay and shale.....	1,600	(X)	1,764	(X)
East North Central:				
Crude common clay and shale.....	7,922	(X)	7,345	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	6,103	(X)	6,126	(X)
In making prepared clay.....	1,482	(X)	636	(X)
Shipments, including interplant transfers.....	337	412	583	720
Prepared common clay and shale shipments, including interplant transfers.....	1,193	5,581	526	2,918
Ohio:				
Crude common clay and shale.....	2,558	(X)	3,048	(X)
Indiana:				
Crude common clay and shale.....	1,077	(X)	(NA)	(X)
Illinois:				
Crude common clay and shale.....	1,936	(X)	1,789	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	1,151	(X)	1,501	(X)
In making prepared clay.....	626	(X)	254	(X)
Shipments, including interplant transfers.....	159	230	34	54
Prepared common clay and shale shipments, including interplant transfers.....	521	2,715	203	1,003
Michigan:				
Crude common clay and shale.....	2,238	(X)	1,424	(X)
West North Central:				
Crude common clay and shale.....	3,157	(X)	2,720	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	2,480	(X)	2,113	(X)
In making prepared clay.....	562	(X)	384	(X)
Shipments, including interplant transfers.....	115	180	223	308
Prepared common clay and shale shipments, including interplant transfers.....	487	2,081	329	2,053
Iowa:				
Crude common clay and shale.....	1,049	(X)	(NA)	(NA)
Missouri:				
Crude common clay and shale.....	917	(X)	891	(X)
South Atlantic:				
Crude common clay and shale.....	7,938	(X)	6,349	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	6,976	(X)	4,792	(X)
In making prepared clay.....	510	(X)	1,074	(X)
Shipments including interplant transfers.....	452	446	483	737
Prepared common clay and shale shipments, including interplant transfers.....	438	2,435	963	7,679
Virginia:				
Crude common clay and shale.....	1,212	(X)	1,408	(X)
North Carolina:				
Crude common clay and shale.....	2,813	(X)	2,119	(X)
South Carolina:				
Crude common clay and shale.....	1,146	(X)	(NA)	(X)
Georgia:				
Crude common clay and shale.....	1,769	(X)	1,362	(X)

See footnotes at end of table.

1963 CENSUS OF MINERAL INDUSTRIES

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Table 3.—PRIMARY PRODUCTS OF THE CLAY AND RELATED MINERALS, N.E.C., INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS:
1963 AND 1958—Continued

Product and geographic area	1963		1958	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
East South Central:				
Crude common clay and shale.....	4,115	(X)	2,915	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	3,384	(X)	2,449	(X)
In making prepared clay.....	502	(X)	385	(X)
Shipments, including interplant transfers.....	229	409	81	233
Prepared common clay and shale shipments, including interplant transfers.....	401	1,901	276	1,306
Alabama:				
Crude common clay and shale.....	1,557	(X)	1,264	(X)
West South Central:				
Crude common clay and shale.....	5,590	(X)	5,307	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	4,029	(X)	3,687	(X)
In making prepared clay.....	1,349	(X)	1,505	(X)
Shipments, including interplant transfers.....	212	214	115	76
Prepared common clay and shale shipments, including interplant transfers.....	855	4,687	792	4,003
Louisiana:				
Crude common clay and shale.....	699	(X)	1,050	(X)
Texas:				
Crude common clay and shale.....	3,364	(X)	3,336	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	2,284	(X)	2,277	(X)
In making prepared clay.....	976	(X)	1,058	(X)
Shipments, including interplant transfers, crude and prepared.....	685	3,120	455	2,444
Mountain:				
Crude common clay and shale.....	1,091	(X)	888	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	389	(X)	525	(X)
In making prepared clay.....	437	(X)	193	(X)
Shipments, including interplant transfers.....	265	971	170	463
Prepared common clay and shale shipments, including interplant transfers.....	337	1,767	166	1,035
Pacific:				
Crude common clay and shale.....	3,352	(X)	2,310	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	2,380	(X)	1,737	(X)
In making prepared clay.....	484	(X)	374	(X)
Shipments, including interplant transfers.....	488	536	199	181
Prepared common clay and shale shipments, including interplant transfers.....	468	5,885	381	8,155
California:				
Crude common clay and shale.....	3,107	(X)	1,947	(X)
Mined and used in the same establishment:				
In making cement and clay products.....	2,220	(X)	(NA)	(X)
In making prepared clay.....	404	(X)	(NA)	(X)
Shipments, including interplant transfers.....	483	531	(NA)	(NA)
Prepared common clay and shale shipments, including interplant transfers.....	403	478	(NA)	(NA)

(NA) Not available. (X) Not applicable. [†]Revised.¹Includes common clay and shale used in making such clay products as brick, tile, clay refractories, other structural clay products, and pottery and related products.²For 1958, includes brucite; no brucite was reported shipped in 1963.³For 1963, figures for prepared common clay and shale shipments in New England are included with those for such shipments in Middle Atlantic.

U.S. DEPARTMENT OF COMMERCE

BUREAU OF THE CENSUS

WASHINGTON, D.C. 20233

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U.S. DEPARTMENT OF COMMERCE

OFFICIAL BUSINESS

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-1

INDUSTRY SERIES

Barite

SIC Code 1472

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Barite Industry shipped products valued at \$16.7 million, an increase of 21 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed

an increase of 17 percent from 1958 to a total of 1,434 employees in 1963. Value added in mining amounted to \$11.1 million in 1963, a decrease of 2 percent from 1958.

The Barite Industry represents establishments engaged primarily in mining, milling, grinding, or otherwise preparing crude barite. Establishments engaged in grinding barite which do not include a mine are classified in the manufacturing Industry 3295, Minerals and earths, ground or otherwise treated. Nearly 60 percent of all ground or otherwise prepared barite produced in 1963 was prepared at such establishments.

Table 1.—GENERAL STATISTICS FOR THE BARITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	54	53	44	¹ 47
With 20 employees or more.....	.....do.....	13	8	11	(NA)
All employees:					
Number.....	.....do.....	1,434	1,227	1,125	854
Payroll.....	Thousand dollars....	6,799	5,177	3,874	752
Production, development, and exploration workers:					
Number.....	Number.....	918	781	1,036	792
Man-hours.....	Thousand.....	1,887	1,588	2,403	1,439
Wages.....	Thousand dollars....	3,590	2,698	3,451	597
Value added in mining.....	.....do.....	11,123	11,321	14,051	1,652
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	.....do.....	5,920	3,169	3,980	² 413
Contract work only.....	.....do.....	956	381	850	21
Cost of purchased machinery installed.....	.....do.....	726	251	1,250	(NA)
Value of shipments and receipts.....	.....do.....	16,668	13,768	18,269	³ 2,065
Capital expenditures.....	.....do.....	1,101	973	1,012	(NA)
Horsepower rating of power equipment.....	Thousand horsepower..	60	(NA)	68	10

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, materials, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most

purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Barite Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, of the total value of shipments and other receipts of establishments classified in the Barite Industry, amounting to \$16.7 million; approximately 98 percent represented products primary to that industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. No crude barite was mined or shipped by other industries, but table 3 indicates that the value of shipments of prepared barite by all industries in 1963 was \$27.1 million. Of this total, \$11.4 million, or 42 percent, were shipped by establishments classified in the Barite industry while the remainder was shipped by establishments classified in other industries.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued.

Final industry reports, final summary reports, and area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United

States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE BARITE INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Industry, region, and State	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of pur- chased machin- ery in- stalled	Value of ship- ments and receipts	Capital ex- pendi- tures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.	54	13	1,434	6,799	918	1,887	3,590	11,123	5,920	726	16,668	1,101	1,227	11,321
West North Central (Missouri).....	17	5	371	1,305	333	698	1,179	3,779	2,512	207	6,184	314	1,307	14,527
South Atlantic.....	5	3	144	682	128	312	573	2,113	606	272	2,708	283	849	5,857
South Central.....	12	5	866	4,542	412	779	1,605	4,290	2,201	203	6,259	435		
Mountain.....	17	-	47	248	39	86	211	859	580	44	1,415	68	37	937
Pacific.....	3	-	6	22	6	12	22	82	21	-	102	1	34	

¹Includes data for one establishment in Kansas.

Table 3.—PRIMARY PRODUCTS OF THE BARITE INDUSTRY PRODUCED IN ALL INDUSTRIES, BY REGIONS AND STATES: 1963 AND 1958

Product, region, and State	1963			1958		
	Total production (1,000 short tons)	Total shipments including interplant transfers		Total production (1,000 short tons)	Total shipments including interplant transfers	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States:						
Crude barite:						
Production and shipments.....	1,090	354	4,964	608	148	1,402
Mined and prepared at same establishment.....	772	(X)	(X)	563	(X)	(X)
Prepared barite (crushed or ground, including flotation concentrates), total.....	(NA)	1,034	27,090	(NA)	1,120	30,466
Processed at establishments classified in the barite industry.....	476	479	11,439	470	1,455	12,032
Processed at establishments classified in other mineral industries and in manufacturing industries..	(NA)	555	15,651	(NA)	665	18,434
North Central (Missouri):						
Crude barite:						
Production and shipments.....	296	167	2,405	148	53	772
Mined and prepared at same establishment.....	141	(X)	(X)	158	(X)	(X)
Prepared barite (crushed or ground, including flotation concentrates).....	(NA)	140	3,757	(NA)	1,202	15,728
South Atlantic:						
Crude barite:						
Production and shipments.....	118	71	1,464	(²)	(²)	(²)
South Central:						
Crude barite:						
Production and shipments.....	540	29	448	2,394	228	2,390
Mined and prepared at same establishment.....	511	(X)	(X)	2,375	(X)	(X)
Prepared barite (crushed or ground, including flotation concentrates), total.....	(NA)	2,830	21,337	(NA)	2,860	23,374
Processed at establishments classified in the barite industry.....	2,297	2,297	26,891	2,271	1,225	16,923
Processed at establishments classified in other mineral industries and in manufacturing industries....	(NA)	533	14,446	(NA)	2,601	16,451
West:						
Crude barite:						
Production and shipments.....	136	87	647	66	67	240
Prepared barite (crushed or ground, including flotation concentrates).....	(NA)	64	1,996	(NA)	158	1,364

NA Not available. X Not applicable.

¹Represents net shipments obtained by subtracting minerals received for preparation from gross shipments. Includes some barite that was prepared by washing only.

²Figures for South Atlantic are included with those for South Central.

U.S. DEPARTMENT OF COMMERCE
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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-2

INDUSTRY SERIES

Fluorspar

SIC Code 1473

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Fluorspar Industry shipped products valued at \$15.8 million, a decrease of 21 percent from 1958, according to preliminary results obtained from the 1963 Census. Average employment in this industry showed a decrease of 36 percent from 1958 to a total of 788

employees in 1963. Value added in mining amounted to \$8.9 million in 1963, a decrease of 30 percent from 1958.

The Fluorspar Industry represents establishments engaged primarily in mining, milling, or otherwise preparing fluorspar.

This report includes figures for administrative offices, storage facilities and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

Table 1.—GENERAL STATISTICS FOR THE FLUORSPAR INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	30	55	104	¹ 61
With 20 employees or more.....	....do.....	7	11	15	(NA)
All employees:					
Number.....	Number.....	788	1,235	1,260	1,396
Payroll.....	Thousand dollars...	3,806	5,616	4,866	1,362
Production, development, and exploration workers:					
Number.....	Number.....	683	1,044	997	1,287
Man-hours.....	Thousand.....	1,346	2,105	2,001	2,568
Wages.....	Thousand dollars...	3,035	4,336	3,451	1,134
Value added in mining.....	....do.....	8,869	12,653	9,914	2,655
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	....do.....	6,968	8,126	5,735	² 742
Minerals received for preparation only.....	....do.....	3,358	3,338	1,728	(NA)
Contract work only.....	....do.....	333	1,127	804	57
Cost of purchased machinery installed.....	....do.....	270	764	561	(NA)
Value of shipments and receipts.....	....do.....	15,792	19,977	15,461	(NA)
Value of net shipments and receipts.....	....do.....	12,434	16,639	13,733	3,397
Capital expenditures.....	....do.....	315	1,566	749	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	25	(NA)	49	21

(NA) Not available

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

January 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Fluorspar Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. Of the total value of shipments

and other receipts of establishments classified in the Fluorspar Industry, amounting to \$15.8 million, approximately 86 percent represented products primary to the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figure appears in table 3. However, no crude fluorspar was mined or shipped by other industries and the shipments of prepared fluorspar by other industries amounted to less than one percent of the total value of prepared fluorspar shipped.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Fluorspar Industry in 1963 was \$15.8 million and the value of net shipments and receipts was \$12.4 million. For the Fluorspar Industry, both of these figures also reflect the inclusion of foreign ores prepared in the United States.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

1963 CENSUS OF MINERAL INDUSTRIES

3

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority

of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE FLUORSPAR INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of purchased machinery installed (\$1,000)	Value of shipments and receipts (\$1,000)	Capital expenditures (\$1,000)	All employees, number	Value added in mining (\$1,000)
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.	30	7	788	3,806	683	1,346	3,035	8,869	6,968	270	15,792	315	1,235	12,653
Northeast and North Central.....	12	4	540	2,641	467	899	2,079	6,127	2,759	81	8,877	90	830	6,590
South.....	11	3	203	952	177	362	785	1,982	4,011	184	5,958	219	164	1,423
Mountain.....	7	-	45	213	39	85	171	760	198	5	957	6	241	4,640

- Represents zero.

Table 3.—PRIMARY PRODUCTS OF THE FLUORSPAR INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Area and product	1963			1958		
	Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts		Total production (1,000 short tons)	Total shipments (including interplant transfers) or receipts	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States:						
Crude fluorspar:						
Production and shipments.....	597	116	906	836	96	1,785
Mined and prepared at same establishment.....	451	(X)	(X)	734	(X)	(X)
Received from other establishments for preparation.....	(X)	281	3,358	(X)	187	3,338
Prepared fluorspar (crushed or ground, including flotation concentrates):						
Production and shipments.....	277	293	12,466	368	366	16,996
Northeast and North Central:						
Crude fluorspar:						
Production and shipments.....	435	7	80	480	58	869
Mined and prepared at same establishment.....	398	(X)	(X)	403	(X)	(X)
Received from other establishments for preparation.....	(X)	17	284	(X)	70	1,051
Prepared fluorspar (crushed or ground, including flotation concentrates):						
Production and shipments.....	129	139	7,027	163	162	7,862
South:						
Prepared fluorspar (crushed or ground, including flotation concentrates):						
Production and shipments.....	115	123	4,556	82	84	3,822
Mountain:						
Prepared fluorspar (crushed or ground, including flotation concentrates):						
Production and shipments.....	33	31	883	123	120	5,312

(X) Not applicable.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON, D.C. 20233
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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-3

INDUSTRY SERIES

Potash, soda, and borate minerals

SIC Code 1474

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume II, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Potash, Soda, and Borate Minerals Industry shipped products valued at \$192 million, an increase of 36 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an increase of 2 percent from 1958 to a total of 6,790 employees in 1963. Value added by mining amounted

to \$156 million in 1963, an increase of 41 percent from 1958.

The Potash, Soda, and Borate Minerals Industry represents establishments engaged primarily in mining, milling, or otherwise preparing natural potassium, sodium, or boron compounds (other than common salt). Products of this industry include potash salts, sodium borates (borax, kernite, ulexite), sodium carbonates (soda ash, trona), sodium sulfates (principally Glauber's salt), and colemanite, a calcium borate. Dry-lake brine operations are included in this industry as well as establishments engaged in producing the specified minerals from underground and open-pit mines.

Table 1.—GENERAL STATISTICS FOR THE POTASH, SODA, AND BORATE MINERALS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	27	21	20	¹ 17
With 20 employees or more.....	.....do.....	16	14	13	(NA)
All employees:					
Number.....	.....do.....	6,792	6,661	6,322	2,438
Payroll.....	Thousand dollars....	49,072	41,067	33,439	4,756
Production and development workers:					
Number.....	Number.....	4,825	4,590	4,738	2,049
Man-hours.....	Thousand.....	9,858	9,212	9,381	4,388
Wages.....	Thousand dollars....	32,905	26,746	23,028	3,445
Value added in mining.....	.....do.....	156,204	111,082	82,213	13,330
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	.....do.....	50,986	34,490	26,210	² 3,701
Contract work only.....	.....do.....	8,012	1,677	1,646	42
Cost of purchased machinery installed.....	.....do.....	11,780	6,936	8,390	(NA)
Value of shipments and receipts.....	.....do.....	192,197	141,115	107,757	³ 17,031
Capital expenditures.....	.....do.....	26,773	11,393	9,056	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.	321	(NA)	195	61

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

January 1965

U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

The preliminary reports in the 1963 Census of Mineral Industries include, for each industry, a count of the number of operating establishments with comparable figures for earlier years.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For the period 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March; for 1954, they represent an average of all employees for the payroll period ended nearest the 15th of March, May, August, and November. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of some mining establishments as supplies, energy sources, or materials by other mining establishments. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best

value measure for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Potash, Soda, and Borate Minerals Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of this industry in 1963 was \$192 million, of which only about one percent represented receipts for secondary products, services, and resales.

The total value of shipments for the industry (which is the total value of receipts of establishments classified in the industry) should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures, in terms of net shipments, appear in table 3. Over 95 percent of the total of these figures represents production in the Potash, Soda, and Borate Minerals Industry, while the remainder was shipped as secondary products by establishments classified in other industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final Census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and

"value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry reports, final summary reports, and area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE POTASH, SODA, AND BORATE MINERALS INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Industry, region, and State	1963											1958		
	Establish- ments,number		All employees		Production and development workers			Value added in mining (\$1,000)	Cost of supplies, minerals received for preparation, purchased energy, and contract work (\$1,000)	Cost of pur- chased machin- ery in- stalled (\$1,000)	Value of ship- ments and receipts (\$1,000)	Capital ex- pendi- tures (\$1,000)	All em- ploy- ees, number	Value added in mining (\$1,000)
	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Man- hours (1,000)	Wages (\$1,000)							
United States, total	27	16	6,792	49,072	4,825	9,858	32,905	156,204	50,986	11,780	192,197	26,773	6,661	111,082
West South Central and Mountain.....	18	12	4,397	31,621	3,311	6,704	22,297	98,974	34,671	8,965	120,622	21,988	4,107	70,174
New Mexico.....	11	6	3,504	25,081	2,702	5,373	18,086	81,204	26,220	5,134	98,150	14,408	3,503	60,141
Pacific (California).....	9	4	2,395	17,451	1,514	3,154	10,608	57,230	16,315	2,815	71,575	4,785	2,554	40,908

¹Includes figures for central offices and related facilities in New York, Illinois, and Virginia.

Table 3.—PRIMARY PRODUCTS OF THE POTASH, SODA, AND BORATE MINERALS INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Product	1963			1958		
	Total production (1,000 short tons)	Total shipments including interplant transfers		Total production (1,000 short tons)	Total shipments including interplant transfers	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
Potassium salts:						
Crude salts	¹ 16,724	(²)	(²)	¹ 12,224	(²)	(²)
Processed or refined salts	4,521	³ 4,624	³ 104,422	3,710	² 4,002	² 82,468
Natural sodium carbonates	(NA)	1,107	26,595	(NA)	639	17,175
Natural sodium sulfate	(NA)	431	8,778	(NA)	344	6,495
Boron compounds	(NA)	723	46,268	(NA)	⁴ 559	⁴ 32,275

NA Not available.

¹Represents production from underground mines only. Does not include production from well brines or dry-lake brines; only shipments were reported for such operations.

²Crude salts are included with processed or refined salts.

³Represents "net" shipments obtained from gross shipments of crude and processed or refined salts by subtracting shipments of crude salts to other establishments for processing or refining.

⁴Represents "net" shipments obtained from gross shipments by subtracting receipts from other establishments for preparation.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-4

INDUSTRY SERIES

preliminary
report

Phosphate rock

SIC Code 1475

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Phosphate Rock Industry shipped products valued at \$161.7 million, an increase of 22 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry

showed an increase of 4 percent from 1958 to a total of 5,624 employees in 1963. Value added in mining amounted to \$94.9 million in 1963, an increase of 47 percent from 1958.

The Phosphate Rock Industry represents establishments engaged primarily in mining, milling, drying, or otherwise preparing phosphate rock, including apatite. Establishments primarily engaged in the production of phosphoric acid, superphosphates, or other manufactured phosphate compounds or chemicals are classified in Major Group 28, Chemicals and Allied Products.

Table 1.—GENERAL STATISTICS FOR THE PHOSPHATE ROCK INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	66	65	75	140
With 20 employees or more.....	do.....	38	37	39	(NA)
All employees:					
Number.....	Number.....	5,624	5,393	5,440	3,754
Payroll.....	Thousand dollars....	31,955	27,210	21,529	3,729
Production, development, and exploration workers:					
Number.....	Number.....	3,999	3,955	4,579	3,372
Man-hours.....	Thousand.....	9,047	8,255	10,119	6,680
Wages.....	Thousand dollars....	20,627	17,185	17,089	2,871
Value added in mining.....	do.....	94,880	64,375	62,089	9,003
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	do.....	74,099	67,326	59,069	² 3,283
Minerals received for preparation only.....	do.....	33,798	41,864	35,393	(NA)
Contract work only.....	do.....	9,648	2,395	2,904	23
Cost of purchased machinery installed.....	do.....	14,885	6,095	8,156	(NA)
Value of shipments and receipts.....	do.....	161,658	132,094	117,976	(NA)
Value of net shipments and receipts.....	do.....	132,122	99,109	82,583	12,286
Capital expenditures.....	do.....	22,206	5,702	11,338	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.	519	(NA)	357	113

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as the value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, in 1963 there were no secondary products or contract or other receipts for this industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3A. However, in 1963 all phosphate rock was produced in the Phosphate Rock Industry.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments. The value of gross shipments and receipts for the Phosphate Rock Industry in 1963 was \$161.7 million and the value of net shipments and receipts was \$132.1 million.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce prepared minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an

industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports

showing U.S. totals for each mining industry and for each State are being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, this census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of minerals industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE PHOSPHATE ROCK INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contact work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			
United States, total.....	66	38	5,624	31,955	3,999	9,047	20,627	94,880	74,099	14,885	161,658	22,206	5,393	64,375
South and East.....	53	29	4,720	26,073	3,221	7,420	15,842	81,493	64,704	12,799	142,456	16,540	4,740	57,237
Florida.....	28	20	3,219	16,410	2,540	6,010	11,990	66,121	52,394	(1)	(1)	(1)	23,259	247,822
Tennessee.....	20	8	674	4,005	626	1,325	3,657	14,525	9,170	2,131	23,440	2,386	760	8,723
West.....	13	9	904	5,882	778	1,627	4,785	13,387	9,395	2,086	19,202	5,666	653	7,138

¹Not shown to avoid disclosing figures for four establishments in Pennsylvania, North Carolina, Louisiana, and Texas.

²Includes data for one establishment in North Carolina with less than 5 employees.

Table 3A.—PRIMARY PRODUCTS OF THE PHOSPHATE ROCK INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963			1958		
	Total production (1,000 long tons)	Total shipments including interplant transfers		Total production (1,000 long tons)	Total shipments including interplant transfers	
		Quantity (1,000 long tons)	Value (\$1,000)		Quantity (1,000 long tons)	Value (\$1,000)
United States:						
Production and shipments:						
Crude phosphate rock (ore or matrix), total.....	63,403	3,703	10,897	46,031	3,162	8,922
Shipped to washer or concentrator.....	(X)	2,463	3,593	(X)	1,817	3,781
All other shipments.....	(X)	1,240	7,304	(X)	1,345	5,141
Washed or concentrated phosphate rock, total.....	18,006	10,218	43,396	12,636	8,492	41,607
Shipped to drier.....	(X)	7,563	27,770	(X)	6,049	29,152
All other shipments.....	(X)	2,655	15,626	(X)	2,443	12,455
Dried phosphate rock.....	14,327	14,389	81,159	11,747	11,817	81,440
Calcined or sintered phosphate rock.....	2,609	2,558	26,206			
Net shipments of phosphate rock ¹	(X)	20,842	130,295	(X)	15,605	99,036
Phosphate rock washed or dried:						
Produced and used at same establishment.....	59,637	(X)	(X)	42,670	(X)	(X)
Received from other establishments for washing or drying.....	(X)	8,832	33,798	(X)	8,289	41,864
East and South:						
Production and shipments:						
Crude phosphate rock (ore or matrix).....	60,641	2,654	4,170	43,727	1,529	2,190
Washed or concentrated phosphate rock.....	17,268	25,684	138,286	12,035	19,667	118,513
Dried, calcined, or sintered phosphate rock.....	16,195			11,242		
Net shipments of phosphate rock ¹	(X)	18,725	112,091	(X)	13,746	90,036
Phosphate rock washed or dried.....	66,328	(X)	(X)	250,121	(X)	(X)
South Atlantic (Florida):						
Production and shipments:						
Crude phosphate rock (ore or matrix).....	54,418	20	31,951	40,115	80	557
Washed or concentrated phosphate rock.....	15,268	8,811		10,669	7,645	37,733
Dried or calcined phosphate rock.....	15,015	15,017	83,893	10,227	10,273	66,003
Net shipments of phosphate rock ¹	(X)	316,402	391,461	(X)	12,136	75,888
Phosphate rock washed or dried:						
Produced and used at same establishment.....	54,399	(X)	(X)	40,047	(X)	(X)
Received from other establishments for washing or drying.....	(X)	8,286	30,308	(X)	7,481	38,655
East South Central (Tennessee):						
Production and shipments:						
Crude phosphate rock (ore or matrix).....	6,223	2,634	3,972	3,612	1,449	1,633
Washed or concentrated phosphate rock.....	1,921	1,777	19,468	1,366	1,668	13,667
Dried, calcined, or sintered phosphate rock.....	1,180			934		
Net shipments of phosphate rock ¹	(X)	2,324	20,630	(X)	1,529	13,042
West:						
Production and shipments:						
Crude phosphate rock (ore or matrix).....	2,762	1,049	6,727	2,304	1,633	6,732
Washed or concentrated phosphate rock.....	738	1,481	12,475	601	642	4,534
Dried, calcined, or sintered phosphate rock.....	741			505		
Net shipments of phosphate rock ¹	(X)	2,117	18,204	(X)	1,859	9,000
Phosphate rock washed or dried.....	22,141	(X)	(X)	2838	(X)	(X)

(X) Not applicable.

¹Represents "All other shipments" of crude and washed or concentrated phosphate rock plus shipments of dried and calcined or sintered phosphate rock.²Represents the combination of phosphate rock produced and washed or dried at the same establishment and phosphate rock received from other establishments for washing or drying.³Includes figures for phosphate rock mined, washed, or concentrated in Pennsylvania, Arkansas, Louisiana, and Texas, amounting to less than 5 percent of this total.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR PHOSPHATE ROCK SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

(Indexes 1954 = 100)

Product code	Product and year	Production	Unit value
1475	Phosphate rock net shipments.....1963...	156	101
	.....1958...	117	103
	Crude phosphate rock.....1963...	137	94
	.....1958...	99	90
	Washed or concentrated phosphate rock.....1963...	159	119
1958...	112	137
	Dried, calcined, or sintered phosphate rock.....1963...	157	100
1958...	109	92

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-5

INDUSTRY SERIES

Rock salt

SIC Code 1476

preliminary report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Rock Salt Industry shipped products valued at \$59.3 million, an increase of 42 percent over 1958, according to preliminary results obtained from the 1963

census. Average employment in this industry showed an increase of 23 percent from 1958 to a total of 2.4 thousand employees in 1963. Value added in mining amounted to \$49.6 million in 1963, an increase of 45 percent from 1958.

The Rock Salt Industry represents establishments engaged primarily in mining, crushing, and screening rock salt. Establishments primarily engaged in producing salt from natural or artificial brines are classified in the manufacturing industry 2899, Chemical Preparations, N.E.C.

Table 1.—GENERAL STATISTICS FOR THE ROCK SALT INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	25	22	15	¹ 17
With 20 employees or more.....	....do.....	16	12	12	(NA)
All employees:					
Number.....	Number.....	2,439	1,984	1,925	1,561
Payroll.....	Thousand dollars...	15,949	10,996	8,571	1,974
Production, development, and exploration workers:					
Number.....	Number.....	1,809	1,602	1,659	1,380
Man-hours.....	Thousand.....	4,251	3,508	3,861	2,608
Wages.....	Thousand dollars...	11,125	7,937	7,117	1,434
Value added in mining.....	....do.....	49,563	34,073	30,013	5,721
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	....do.....	11,970	8,222	6,297	² 1,175
Cost of purchased machinery installed.....	....do.....	5,157	2,125	1,534	(NA)
Value of shipments and receipts.....	....do.....	59,294	41,813	35,658	³ 6,896
Capital expenditures.....	....do.....	7,396	2,607	2,186	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	102	(NA)	48	23

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

January 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



1963 CENSUS OF MINERAL INDUSTRIES

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery.

Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic

areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Rock Salt Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Rock Salt Industry amounted to \$59.3 million in 1963. Of this total, \$4.5 million were products primary to other industries and receipts for miscellaneous activities.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. It indicates that the total net shipments of rock salt by all industries was valued at \$55.5 million in 1963, of which less than 2 percent was shipped by producers in other industries. Net shipments is obtained by subtracting rock salt received for preparations from gross shipments.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports, will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

1963 CENSUS OF MINERAL INDUSTRIES

3

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services,

under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE ROCK SALT INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Region and State	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.	25	15	2,439	15,949	1,809	4,251	11,125	49,563	11,970	5,157	59,294	7,396	1,984	34,073
Northeast and North Central.....	7	7	1,377	10,360	917	2,283	6,695	28,544	4,691	2,615	32,214	3,636	1,067	20,697
South and West.....	18	8	1,062	5,589	892	1,968	4,430	21,019	7,279	2,542	27,080	3,760	917	13,376
Louisiana.....	5	5	837	4,387	735	1,589	3,693	18,531	6,095	2,437	23,571	3,492	(NA)	(NA)

(NA) Not available.

Table 3.—PRIMARY PRODUCTS OF THE ROCK SALT INDUSTRY, BY REGIONS: 1963 AND 1958

Region	1963		1958	
	Total shipments including interplant transfers		Total shipments including interplant transfers	
	Quantity (1,000 short tons)	Value (\$1,000)	Quantity (1,000 short tons)	Value (\$1,000)
United States, total.....	18,561	155,548	15,445	140,525
Northeast and North Central.....	5,562	32,831	3,583	24,495
West South Central.....	2,735	21,638	1,585 ¹	14,638
West.....	1264	11,079	1277	11,392

¹Represents net shipments obtained by subtracting minerals received for preparation from gross shipments.

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BUREAU OF THE CENSUS
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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14E-6



INDUSTRY SERIES

Sulfur

SIC Code 1477

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Sulfur Industry shipped products valued at \$113 million, an increase of 6 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 29 percent from 1958 to 1963 to a

total of 2,603 employees in 1963. Value added in mining in the industry amounted to \$100 million in 1963, an increase of 7 percent from 1958 when the previous census was taken.

The Sulfur Industry represents establishments engaged primarily in mining native sulfur, including the extraction of native sulfur at well operations and mining and beneficiating sulfur ore. Establishments primarily engaged in mining, preparing to mine, or concentrating pyrites are classified in Industry 1479, Chemical and Fertilizer Mineral Mining, n.e.c. Establishments primarily engaged in recovering elemental

GENERAL STATISTICS FOR THE SULFUR INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	17	24	20	¹ 10
With 20 employees or more.....	.....do.....	10	13	13	(NA)
All employees:					
Number.....	Number.....	2,603	3,677	4,095	2,024
Payroll.....	Thousand dollars.....	20,597	24,570	21,186	4,456
Production, development, and exploration workers:					
Number.....	Number.....	1,600	2,303	3,077	1,517
Man-hours.....	Thousand.....	3,264	4,644	6,229	3,031
Wages.....	Thousand dollars.....	10,566	13,267	14,619	2,545
Value added in mining.....	.....do.....	100,349	94,063	124,166	28,863
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	.....do.....	13,041	21,344	22,561	² 2,949
Contract work only.....	.....do.....	451	7,496	2,833	116
Cost of purchased machinery installed.....	.....do.....	799	7,077	2,803	(NA)
Value of shipments and receipts ³.....	.....do.....	113,103	106,202	140,685	31,812
Native sulfur and sulfur ore:					
Production.....	1,000 long tons.....	4,883	4,654	5,729	2,091
Shipments.....	.....do.....	4,923	4,619	5,510	(NA)
Capital expenditures.....	Thousand dollars.....	1,086	16,282	8,845	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	150	(NA)	159	45

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³For 1963, receipts for secondary products and services amounted to only \$12 thousand; for 1958, to \$2 thousand; and for 1954, to \$24 thousand.

December 1964

U.S. DEPARTMENT OF COMMERCE, Luther H. Hodges, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



sulfur from natural gas are classified in the manufacturing Industry 2819, Inorganic Chemicals, n.e.c.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a report for each separate location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Sulfur Industry consists not only of products described above as primary to the industry, but also includes the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, the 1963 total value of shipments and other receipts of establishments classified in the Sulfur Industry, which amounted to \$113,103 thousand, includes only \$12 thousand for receipts for secondary products and miscellaneous receipts. No native sulfur or sulfur ore was produced in other industries in 1963.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll period ended nearest the 15th of March, May, August, and November plus the number of all other employees about March 15. For 1954, the all employees figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March,

May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for the most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing United States totals for each mining industry and for each State is being issued. Final industry reports, final summary reports, and area reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce Field Office or by writing to the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7". Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

MICS(P)-14E-7

INDUSTRY SERIES

**preliminary
report**

Miscellaneous chemical and fertilizer minerals

SIC Code 1479

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Miscellaneous Chemical and Fertilizer Minerals Industry shipped products valued at \$20.6 million, an increase of 31 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 47 percent from 1958 to a total of 1.1 thousand employees in 1963. Value added in mining

amounted to \$14.8 million in 1963, an increase of 52 percent from 1958.

The Miscellaneous Chemical and Fertilizer Minerals Industry represents establishments engaged primarily in mining, milling, or otherwise preparing chemical or fertilizer mineral raw materials, not elsewhere classified, such as arsenic minerals, guano, lithium minerals, mineral pigments, pyrites, and strontium minerals.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the

GENERAL STATISTICS FOR THE MISCELLANEOUS CHEMICAL AND FERTILIZER MINERALS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958 ^r	1954 ^r
Establishments:				
Total.....	Number.....	17	24	27
With 20 employees or more.....	...do.....	6	7	7
All employees:				
Number.....	Number.....	1,080	2,020	1,254
Payroll.....	Thousand dollars....	5,962	7,750	4,921
Production, development, and exploration workers:				
Number.....	Number.....	772	1,606	1,056
Man-hours.....	Thousand.....	1,558	2,719	2,125
Wages.....	Thousand dollars....	3,779	6,137	3,836
Value added in mining.....	...do.....	14,770	9,745	14,671
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	6,755	6,606	1,388
Cost of purchased machinery installed.....	...do.....	190	157	984
Value of shipments and receipts.....	...do.....	20,607	15,760	14,963
Value of net primary products shipped in all industries (pyrites and miscellaneous chemical and fertilizer minerals) ¹.....	...do.....	13,376	10,826	11,060
Capital expenditures.....	...do.....	1,108	748	2,080
Horsepower rating of power equipment.....	Thousand horsepower.	38	(NA)	43

^rRevised.

(NA) Not available.

¹Represents value of gross shipments of primary products less cost of minerals received for preparation.

February 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery.

Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure available for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Miscellaneous Chemical and Fertilizer Minerals Industry consists not only of

products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Miscellaneous Chemical and Fertilizer Minerals Industry amounted to \$20.6 million in 1963 of which about 65 percent represented primary products of the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. In 1963, the total value of net shipments of primary products of the industry was \$13.4 million, of which approximately 86 percent was produced in the Miscellaneous Chemical and Fertilizer Minerals Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics with product statistics which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of minerals industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

MICS(P)-14F-1

INDUSTRY SERIES

Nonmetallic minerals (except fuels) services

SIC Code 1481

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Nonmetallic Minerals (Except Fuels) Services Industry performed services valued at \$13.0 million, an increase of 64 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 23

percent from 1958 to a total of 849 employees in 1963. Value added in mining amounted to \$8.6 million in 1963, an increase of 39 percent from 1958.

The Nonmetallic Minerals (Except Fuels) Services Industry represents establishments engaged primarily in performing nonmetallic minerals (except fuels) services on a contract, fee, or other basis. Included are such services as stripping overburden, strip mining, drilling, shaft sinking, and mine tunnelling.

This report includes figures for administrative offices, storage facilities, and other auxiliary

Table 1.—GENERAL STATISTICS FOR THE NONMETALLIC MINERALS (EXCEPT FUELS) SERVICES INDUSTRY FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	117	75	62	65
With 20 employees or more.....	...do.....	11	6	4	(NA)
All employees:					
Number.....	Number.....	849	1,109	639	335
Payroll.....	Thousand dollars...	4,469	3,522	2,327	368
Production, development, and exploration workers:					
Number.....	Number.....	789	1,037	614	307
Man-hours.....	Thousand.....	1,543	1,893	1,258	632
Wages.....	Thousand dollars...	4,014	3,038	2,214	320
Value added in mining.....	...do.....	8,631	6,217	4,884	725
Cost of supplies, purchased fuel and electric energy, and subcontract work.....	...do.....	4,630	1,865	1,666	1,241
Cost of purchased machinery installed.....	...do.....	1,216	700	402	(NA)
Receipts for services and shipments.....	...do.....	13,014	7,934	6,571	966
Capital expenditures.....	...do.....	1,463	848	381	53
Horsepower rating of power equipment.....	Thousand horsepower	75	(NA)	39	18

(NA) Not available.

¹Excludes the cost of subcontract work and products purchased for resale. For 1954, the cost of subcontract work was \$213 thousand and the cost of products purchased for resale \$133 thousand.

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units which service establishments in this industry. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated as single-establishment companies and file a single report. Firms operating more than one establishment were required to submit a report for each establishment. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size. Mining service establishments, however, were permitted to file one report for all mining services performed in the United States.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries or geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The total receipts for services reported by establishments classified in the Nonmetallic Minerals

(Except Fuels) Services Industry consists not only of receipts for services described above as primary to the industry, but also of the value of secondary services, such as hauling (which are primary in other industries). However, the total receipts of establishments classified in the Non-metallic Minerals (Except Fuels) Services Industry amounted to \$13.0 million, of which less than \$1 million represented services primary to other industries.

The total receipts for the industry, which are the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total receipts for primary services of the industry by all service establishments. Such figures are shown in table 3. However, for 1963, receipts for services primary to this industry reported by establishments classified in other industries amounted to less than one percent of the total of \$12.7 million shown for such services.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, receipts for services, etc.) in table 1 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the primary services of the industry performed by all mineral services industries.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other mineral industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

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Table 2.—GENERAL STATISTICS FOR THE NONMETALLIC MINERALS (EXCEPT FUELS) SERVICES INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, purchased energy, and subcontract work	Cost of purchased machinery installed	Receipts for services and ship- ments	Capital expendi- tures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll	Number	Man- hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States.	117	11	849	4,469	789	1,543	4,014	8,631	4,630	1,216	13,014	1,463	1,109	6,217
East North Central	18	-	68	265	61	106	232	517	183	123	695	128	71	632
West North Central	30	-	110	401	104	203	394	1,348	410	261	1,648	371	49	615
Missouri.....	26	-	94	314	88	181	312	1,164	298	138	1,381	219	(NA)	(NA)
South Atlantic....	12	1	93	380	88	169	354	708	214	31	889	64	(NA)	(NA)
East South Central	10	2	118	577	97	204	358	1,049	712	46	1,718	89	73	455
Mountain.....	18	5	267	1,865	255	523	1,798	2,993	2,261	672	5,224	702	(NA)	(NA)
New Mexico.....	5	3	115	867	109	223	832	1,175	1,616	378	2,788	381	(NA)	(NA)
Pacific.....	10	3	136	813	128	238	714	1,493	652	10	2,107	48	(NA)	(NA)

NOTE: In general, contractors prepared one report for all mining services performed in the United States. These reports were classified on the basis of the principal kind of work and the principal State in which the service was performed.

(NA) Not available.

Table 3.—PRIMARY PRODUCTS OF THE NONMETALLIC MINERALS (EXCEPT FUELS) SERVICES INDUSTRY PERFORMED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

(In general, contractors prepared one report for all mining services in the United States. These reports were classified on the basis of the principal State in which this service was performed. Separate data were contained in these reports for the various kinds of work performed)

Type of service and geographic area	Total receipts for services (\$1,000)	
	1963	1958
United States, total.....	12,655	7,282
Prospect and test drilling.....	1,110	1,558
Other drilling, including blasting.....	1,595	
Stripping overburden.....	1,494	
Mining minerals for others.....	6,031	
Sinking mine shafts, driving mine tunnels, exploration work, and other work.....	2,425	1,407
Northeast and North Central, total.....	2,829	(NA)
Stripping overburden and mining minerals for others.....	2,185	(NA)
Other work.....	644	(NA)
South, total.....	2,840	(NA)
Stripping overburden and mining minerals for others.....	2,282	(NA)
Other work.....	558	(NA)
West, total.....	6,986	(NA)
Drilling.....	1,624	(NA)
Stripping overburden and mining minerals for others.....	3,058	(NA)
Sinking mine shafts and other work.....	2,304	(NA)

(NA) Not available.

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MIC63(P)-14F-2

INDUSTRY SERIES

preliminary
report

Gypsum

SIC Code 1492

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Gypsum Industry shipped products valued at \$10.2 million, an increase of 44 percent over 1958, according to preliminary results obtained from the 1963 census.

Average employment in this industry showed an increase of 13 percent from 1958 to a total of 458 employees in 1963. Value added in mining amounted to \$7.8 million in 1963, an increase of 30 percent from 1958.

The Gypsum Industry represents establishments primarily engaged in mining, quarrying, milling, or otherwise preparing gypsum. Calcining activities are excluded. However, if a gypsum mine is part of an establishment producing gypsum or other manufactured products, the entire establishment is

Table 1.—GENERAL STATISTICS FOR THE GYPSUM INDUSTRY AND GYPSUM MINES IN MANUFACTURES IN THE UNITED STATES: 1963, 1958, 1954, AND 1939

Item	Unit of measure	1963			1958			1954			1939
		Total	Gypsum industry	Gypsum mines in manufactures	Total	Gypsum industry	Gypsum mines in manufactures	Total	Gypsum industry	Gypsum mines in manufactures	
Establishments:											
Total.....	Number..	74	37	37	64	32	32	64	37	27	159
With 20 employees or more.....	...do...	22	6	16	20	4	16	(NA)	5	(NA)	(NA)
All employees:											
Number.....	Number..	1,179	458	² 721	1,271	406	² 865	1,478	449	² 1,029	1,424
Payroll.....	\$1,000..	6,039	2,406	² 3,633	5,588	1,805	² 3,783	5,857	1,852	² 4,005	1,857
Production, development, and exploration workers:											
Number.....	Number..	1,104	383	² 721	1,219	354	² 865	1,428	399	² 1,029	1,327
Man-hours.....	1,000..	2,249	807	1,442	2,506	776	1,730	2,984	926	2,058	2,466
Wages.....	\$1,000..	5,546	1,913	3,633	5,264	1,481	3,783	5,572	1,567	4,005	1,640
Value added in mining.....	...do...	33,640	7,753	25,887	29,753	5,958	23,795	27,642	5,352	22,290	3,756
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do...	5,651	2,822	2,829	4,661	1,332	3,329	4,247	1,307	2,940	³ 813
Cost of purchased machinery installed.....	...do...	(NA)	864	(NA)	(NA)	578	(NA)	(NA)	2,395	(NA)	(NA)
Value of shipments and receipts.....	...do...	38,876	10,160	⁴ 28,716	34,172	7,048	⁴ 27,124	31,861	6,631	⁴ 25,230	³ 4,569
Capital expenditures.....	...do...	(NA)	1,279	(NA)	(NA)	820	(NA)	(NA)	2,423	(NA)	(NA)
Horsepower rating of power equipment.....	1,000 hp....	(NA)	30	(NA)	(NA)	(NA)	(NA)	(NA)	28	(NA)	29

(NA) Not available.

¹Represents number of mines.

²Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations; hence, the same figures are shown for production, development, and exploration workers and for all employees.

³Excludes cost of minerals received for preparation.

⁴Includes the estimated value of gypsum produced and used in the same establishment in the manufacture of calcined gypsum products.

⁵Represents value of net shipments and receipts.

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classified in the manufacturing Industry 3275, Gypsum Products, or in another appropriate manufacturing industry. In 1963, over two-thirds of all gypsum produced was mined at such establishments. Selected statistics for such mines are included in tables 1, 2, and 3.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For the period 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figures represent averages of 12 monthly figures

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only

of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Gypsum Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. The total value of shipments and other receipts of establishments classified in the Gypsum Industry amounted to \$10.2 million of which over 90 percent represented primary products of the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. They show that all crude gypsum shipped in 1963 was shipped by the Gypsum Industry, but that only 32 percent of all crude gypsum was produced in that industry. They also show that only 61 percent of all crushed, ground, screened, or dried gypsum shipped in 1963 was shipped by the Gypsum Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order

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forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the

year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE GYPSUM INDUSTRY AND GYPSUM MINES INCLUDED IN MANUFACTURES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Industry and geographic area	1963												1958	
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States, total.....	74	22	1,179	6,039	1,104	2,249	5,546	33,640	5,651	(NA)	38,876	(NA)	1,271	29,753
Gypsum industry....	37	6	458	2,406	383	807	1,913	7,753	2,822	864	10,160	1,279	406	5,958
Gypsum mines in manufactures.....	37	16	1,721	13,633	1,721	1,442	3,633	25,887	2,829	(NA)	228,716	(NA)	1,865	23,795
Middle Atlantic (New York).....	5	3	149	907	145	286	879	1,862	826	(NA)	2,623	(NA)	242	2,857
East North Central	9	5	261	1,405	244	477	1,270	8,319	993	(NA)	9,188	(NA)	2,421	212,536
West North Central (all mines in manufactures)....	7	5	1,132	1,624	1,132	264	624	6,373	766	(NA)	27,139	(NA)	(3)	(3)
South.....	18	5	345	1,446	322	657	1,326	7,179	1,408	(NA)	8,447	(NA)	363	7,223
Gypsum industry ⁴	10	2	127	503	104	221	383	1,140	922	416	1,922	556	(NA)	(NA)
Gypsum mines in manufactures.....	8	3	1,218	1,943	1,218	436	943	6,039	486	(NA)	26,525	(NA)	(NA)	(NA)
Oklahoma.....	7	1	66	302	58	115	245	1,707	197	265	1,937	332	66	1,566
Texas.....	7	1	86	387	82	163	373	3,800	345	(NA)	3,995	(NA)	86	4,324
West.....	35	4	292	1,657	261	565	1,447	9,907	1,658	(NA)	11,479	(NA)	245	7,137
Gypsum industry.....	22	2	166	976	135	313	766	2,930	1,104	204	3,948	290	135	2,272
Gypsum mines in manufactures.....	13	2	1,126	1,681	1,126	252	681	6,977	554	(NA)	27,531	(NA)	1,110	4,865
New Mexico.....	3	-	12	70	10	21	54	470	342	10	812	10	(NA)	(NA)
Nevada.....	5	1	74	534	71	153	505	2,690	524	79	3,244	49	(NA)	(NA)
Gypsum industry: Mountain (gypsum industry only).	13	1	85	540	69	152	430	1,127	779	94	1,857	143	67	871
Pacific (gypsum industry only).	9	1	81	436	66	161	336	1,803	325	110	2,091	147	68	1,401

- Represents zero. (NA) Not available.

*Number of production, development, and exploration workers was estimated from reported figures for man-hours. No data were obtained on other employees at such operations; hence, the same figures are shown for production, development, and exploration workers and for all employees.

†Includes the estimated value of gypsum produced and used in the same establishment in the manufacture of calcined gypsum products.

‡Figures for West North Central are included with those for East North Central.

§All in West South Central.

¶Excludes figures for mines included in establishments classified in manufacturing.

Table 3.—PRIMARY PRODUCTS OF THE GYPSUM INDUSTRY PRODUCED IN ALL INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963			1958		
	Total production (1,000 short tons)	Total shipments including interplant transfers		Total production (1,000 short tons)	Total shipments including interplant transfers	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States:						
Crude gypsum, total.....	10,187	339	1,094	9,384	737	1,414
Produced by mines classified in the Gypsum Industry.....	3,246	339	1,094	2,569	737	1,414
Produced by mines included in establishments classified in manufacturing industries ¹	6,941	-	-	6,815	-	-
Crude gypsum mined and prepared at the same establishment in the Gypsum Industry.....	2,844	(X)	(X)	1,832	(X)	(X)
Crushed, ground, screened, or dried gypsum, total.....	(NA)	4,599	18,551	(NA)	3,829	15,939
Produced at preparation plants included in establishments classified in the Gypsum Industry.....	2,828	2,812	8,535	1,830	1,825	5,622
Produced at preparation plants included in establishments classified in manufacturing industries.....	(NA)	1,787	10,016	(NA)	2,004	10,317
Northeast and North Central:						
Crude gypsum, total.....	4,602	-	-	4,565	-	-
Produced by mines classified in the Gypsum Industry.....	1,241	-	-	916	-	-
Produced by mines included in establishments classified in manufacturing industries ¹	3,361	-	-	3,649	-	-
Crushed, ground, screened, or dried gypsum.....	(NA)	2,039	9,076	(NA)	1,860	8,792
Middle Atlantic (New York): Crude gypsum.....	615	-	-	818	-	-
East North Central: Crude gypsum.....	2,348	-	-	3,747	-	-
West North Central: Crude gypsum.....	1,639	-	-	-	-	-
South:						
Crude gypsum, total.....	2,064	(D)	(D)	2,179	(D)	(D)
Produced by mines classified in the Gypsum Industry.....	402	(D)	(D)	451	(D)	(D)
Produced by mines included in establishments classified in manufacturing industries ¹	1,662	-	-	1,728	-	-
Crushed, ground, screened, or dried gypsum.....	(NA)	907	4,264	(NA)	802	3,604
Oklahoma: Crude gypsum.....	557	(D)	(D)	493	(NA)	(NA)
Texas: Crude gypsum.....	1,004	-	-	1,187	(NA)	(NA)
West:						
Crude gypsum, total.....	3,521	(D)	(D)	2,640	(D)	(D)
Produced by mines classified in the Gypsum Industry.....	1,603	(D)	(D)	1,202	(D)	(D)
Produced by mines included in establishments classified in manufacturing industries ¹	1,918	-	-	1,438	-	-
Crushed, ground, screened, or dried gypsum, total.....	(NA)	1,653	5,211	(NA)	1,167	3,543
New Mexico: Crude gypsum.....	220	(D)	(D)	(NA)	(NA)	(NA)
Nevada: Crude gypsum.....	854	-	-	(NA)	(NA)	(NA)

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies.

(NA) Not available.

(X) Not applicable.

¹Includes gypsum produced and used in the same establishment in manufacturing gypsum products.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14F-3

INDUSTRY SERIES

preliminary
report

Mica

SIC Code 1493

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Mica Industry shipped products valued at \$5.8 million, a decrease of 6 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 44 percent from 1958 to a total of 404

employees in 1963. Value added in mining amounted to \$4.2 million in 1963, a decrease of 15 percent from 1958.

The Mica Industry represents establishments engaged primarily in mining, milling, or otherwise preparing mica. Establishments engaged in grinding mica which do not include a mine are classified in the manufacturing Industry 3295, Minerals and Earths, Ground or Otherwise Treated. About 34 percent of the quantity of all ground mica shipped in 1963 was prepared at such establishments.

This report includes figures for administrative offices, storage facilities, and other auxiliary

TABLE 1.—GENERAL STATISTICS FOR THE MICA INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	34	149	498	¹ 21
With 20 employees or more.....	...do.....	5	8	6	(NA)
All employees:					
Number.....	Number.....	404	727	710	210
Payroll.....	Thousand dollars....	1,586	2,007	1,342	138
Production, development, and exploration workers:					
Number.....	Number.....	336	649	668	190
Man-hours.....	Thousand.....	723	1,204	1,196	361
Wages.....	Thousand dollars....	1,285	1,709	1,255	118
Value added in mining.....	...do.....	4,232	4,974	3,284	276
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	2,025	1,841	1,228	² 51
Contract work only.....	...do.....	187	304	347	-
Cost of purchased machinery installed.....	...do.....	481	577	474	(NA)
Value of shipments and receipts.....	...do.....	5,838	6,221	4,126	³ 327
Capital expenditures.....	...do.....	900	1,171	860	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.	29	(NA)	17	2

- Represents zero. (NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

February 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Mica Industry consists not only of products described above as primary to the

industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. For the Mica Industry, the total value of shipments and other receipts in 1963 was \$5.8 million, of which \$5.2 million represented products primary to the industry.

The total value of shipments for the industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3A. Over 95 percent of all crude mica was produced in the Mica Industry in 1963. But, as indicated in Table 3A, the value of shipments of ground mica amounted to \$7.5 million in 1963, of which \$3.9 million, or 52 percent represented shipments by the Mica Industry.

INDEXES OF PRODUCTION AND UNIT VALUE

Based on the type of quantity and value statistics shown in table 3A, indexes of production and unit value (value of shipments divided by quantity of shipments) have been constructed for the primary products of the industry produced or shipped by all producers, including those in other industries, and are shown in table 3B. Unit values were computed for each product for which quantity figures were available. The 1958 unit values were used as weights in construction of a weighted aggregative production index. A comparable weighted aggregative unit value index, weighted by quantity of production or shipments, was also constructed. The latter index was used, where necessary, to deflate total value of shipments of primary products for which no quantity data were available. The indexes for all primary products combined are net indexes and exclude the production of crude minerals used to produce refined minerals.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3A) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry

1963 CENSUS OF MINERAL INDUSTRIES

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and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United

States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE MICA INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Region and State	1963											1958		
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States.....	34	5	404	1,586	336	723	1,285	4,232	2,025	481	5,838	900	727	4,974
South.....	21	5	352	1,399	288	621	1,110	3,845	1,805	383	5,283	750	524	3,465
North Carolina.....	14	4	240	985	201	444	775	2,365	1,245	357	3,475	492	391	2,714

Table 3A.—PRIMARY PRODUCTS OF THE MICA INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Product, region, and State	Unit of measure	1963			1958		
		Total production (quantity)	Total shipments including interplant transfers		Total production (quantity)	Total shipments including interplant transfers	
			Quantity	Value (\$1,000)		Quantity	Value (\$1,000)
United States:							
Hand-cobbed mica.....	1,000 pounds.....	108	108	16	{ 3,407	3,395	849
Sheet mica.....	..do.....					406	2,702
Scrap (or flake) mica.....	Short tons.....	118,596	60,016	2,170	106,326	48,478	989
Ground mica, total.....	..do.....	(NA)	117,326	7,477	(NA)	114,892	5,950
Mined and processed at establishments classified in the mineral industries.....	..do.....	77,589	77,170	3,900	71,831	71,385	2,332
Processed at establishments classified in the manufacturing industries.....	..do.....	(NA)	40,156	3,577	(NA)	43,507	3,618
Northeast and North Central:							
Hand-cobbed mica.....	1,000 pounds.....	-	-	-	1,897	1,890	479
Sheet mica.....	..do.....	-	-	-	137	137	892
Scrap (or flake) mica.....	Short tons.....	4,101	4,101	137	3,598	2,802	79
Ground mica.....	..do.....	(NA)	8,548	507	(NA)	14,848	1,107
South:							
Hand-cobbed mica.....	1,000 pounds.....	108	108	16	{ 1,417	1,412	331
Sheet mica.....	..do.....					267	1,789
Scrap (or flake) mica.....	Short tons.....	102,550	49,709	1,817	93,348	44,398	875
Ground mica.....	..do.....	(NA)	103,145	6,504	(NA)	86,228	4,318
North Carolina:							
Hand-cobbed mica.....	1,000 pounds.....	(D)	(D)	(D)	1,346	1,341	316
Sheet mica.....	..do.....	(D)	(D)	(D)	256	255	1,701
Scrap (or flake) mica.....	Short tons.....	58,124	34,017	1,430	48,166	30,871	582
Ground mica.....	..do.....	(NA)	57,651	3,783	(NA)	44,877	2,515
West:							
Hand-cobbed mica.....	1,000 pounds.....	-	-	-	93	93	39
Sheet mica.....	..do.....	-	-	-	2	2	21
Scrap (or flake) mica.....	Short tons.....	11,945	6,206	216	9,380	1,278	35
Ground mica.....	..do.....	(NA)	5,633	466	(NA)	13,816	525

- Represents zero. (D) Withheld to avoid disclosing figures for individual companies. (NA) Not available.

Table 3B.—INDEXES OF PRODUCTION AND UNIT VALUE FOR MICA SHIPPED BY ALL PRODUCERS IN THE UNITED STATES: 1963 AND 1958

Product and year	Indexes (1954=100)	
	Production	Unit value
Mica.....1963...	77	136
.....1958...	122	108
Crude mica (hand-cobbed, sheet, and scrap).....1963...	51	237
.....1958...	116	137
Ground mica.....1963...	131	122
.....1958...	133	95

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14F-4



INDUSTRY SERIES

Native asphalt and bitumens and Peat

SIC Codes 1494 and 1498

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Native Asphalt and Bitumens Industry shipped products valued at \$8.6 million, an increase of 7 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 8 percent from 1958

to a total of 425 employees in 1963. Value added in mining amounted to \$6.4 million in 1963, an increase of 7 percent from 1958.

During 1963, establishments in the Peat Industry shipped products valued at \$7.4 million, an increase of 69 percent over 1958, according to preliminary results. Average employment in this industry showed an increase of 30 percent from 1958 to a total of 504 employees in 1963. Value added in mining amounted to \$5.7 million in 1963, an increase of 57 percent from 1958.

The Native Asphalt and Bitumens Industry represents establishments engaged primarily in mining,

Table 1A.—GENERAL STATISTICS FOR THE NATIVE ASPHALT AND BITUMENS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	14	10	12	¹ 23
With 20 employees or more.....	...do.....	4	5	7	(NA)
All employees:					
Number.....	...do.....	425	464	551	853
Payroll.....	Thousand dollars...	2,253	2,265	2,147	892
Production, development, and exploration workers:					
Number.....	Number.....	360	367	451	730
Man-hours.....	Thousand.....	734	732	987	¹ 330
Wages.....	Thousand dollars...	1,734	1,398	1,443	608
Value added in mining.....	...do.....	6,375	5,954	4,857	2,554
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	2,657	2,293	1,643	² 414
Cost of purchased machinery installed.....	...do.....	627	517	476	(NA)
Value of shipments and receipts.....	...do.....	8,573	8,041	6,424	³ 2,968
Capital expenditures.....	...do.....	1,086	723	552	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	35	(NA)	31	13

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

March 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



milling or otherwise preparing native asphalt and bitumens, including gilsonite, wurtzilite, grahamite, and ozokerite. The mining of bituminous sandstone and bituminous limestone is also included.

The Peat Industry represents establishments engaged primarily in mining peat and in the preparation of peat.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons

it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. For the Native Asphalt and Bitumens Industry, the total value of shipments and other receipts in 1963 was \$8.6 million of which over 99 percent represented products primary to the industry. For the Peat industry, value of shipments and receipts amounted to \$7.4 million, all of which represented products primary to the industry.

The total value of shipments for an industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, for the Peat Industry, over 99 percent of the peat production was produced in the Peat Industry; and all native asphalt and bitumens were produced in the Native Asphalt and Bitumens Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for these industries will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

1963 CENSUS OF MINERAL INDUSTRIES

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The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority

of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE PEAT INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	109	81	88	125
With 20 employees or more.....	...do.....	4	3	3	(NA)
All employees:					
Number.....	...do.....	504	389	353	184
Payroll.....	Thousand dollars....	1,778	1,282	940	144
Production, development, and exploration workers:					
Number.....	Number.....	442	335	321	157
Man-hours.....	Thousand.....	948	613	637	246
Wages.....	Thousand dollars....	1,473	974	829	101
Value added in mining.....	...do.....	5,719	3,640	1,800	338
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	1,867	1,104	572	240
Contract work only.....	...do.....	132	134	46	-
Cost of purchased machinery installed.....	...do.....	809	446	159	(NA)
Value of shipments and receipts.....	...do.....	7,378	4,379	2,326	3,378
Capital expenditures.....	...do.....	1,017	811	205	(NA)
Horsepower rating of power equipment.....	Thousand horsepower.....	27	(NA)	24	3

- Represents zero. (NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of production and receipts.

Table 2.—GENERAL STATISTICS FOR THE PEAT INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963												1958	
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll (\$1,000)	Number	Man-hours (1,000)	Wages (\$1,000)							
United States.....	109	4	504	1,778	442	948	1,473	5,719	1,867	809	7,378	1,017	389	3,640
Northeast.....	21	-	73	287	66	149	247	677	128	178	762	221	90	587
Middle Atlantic.....	15	-	59	233	52	118	193	511	102	158	592	179	78	514
East North Central.....	43	3	255	850	231	487	754	3,694	1,387	261	5,009	333	(NA)	(NA)
Michigan.....	28	3	206	626	187	399	568	2,960	1,185	182	4,288	239	140	1,721
West North Central.....	7	1	59	280	52	114	180	391	128	157	516	160	(NA)	(NA)
West.....	26	-	77	244	54	109	177	613	138	84	687	148	(NA)	(NA)
Pacific.....	16	-	62	212	40	77	146	477	99	76	523	129	(NA)	(NA)

- Represents zero. (NA) Not available.

Table 3.—PRIMARY PRODUCTS OF THE NATIVE ASPHALT AND BITUMENS AND PEAT INDUSTRIES, BY GEOGRAPHIC AREAS: 1963 AND 1958

Product and geographic area	1963			1958		
	Total production (1,000 short tons)	Total shipments including interplant transfers		Total production (1,000 short tons)	Total shipments including interplant transfers	
		Quantity	Value		Quantity	Value
		(1,000 short tons)	(1,000 short tons)		(\$1,000)	(1,000 short tons)	($1,000)
NATIVE ASPHALT AND BITUMENS						
United States:						
Gilsonite.....	(D)	(D)	8,563 {	317	321	4,700
Bituminous limestone and bituminous sandstone.....	1,262	1,272		1,298	1,298	3,327
PEAT						
United States, total.....	575	558	7,374	366	365	4,253
Northeast.....	84	84	744	62	62	600
North Central.....	361	346	5,523	165	165	2,837
Michigan.....	252	250	4,288	124	124	2,308
South.....	49	48	420	46	45	276
West.....	81	80	687	93	93	540

(D) Withheld to avoid disclosing figures for individual companies.

U.S. DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
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OFFICIAL BUSINESS

1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14F-5

INDUSTRY SERIES

Pumice and pumicite and Natural abrasives

SIC Codes 1495 and 1497

preliminary report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Pumice and Pumicite Industry shipped products valued at \$5.3 million, a decrease of 3 percent from 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 30 percent from 1958 to a total of 247 employees in 1963. Value added in mining

amounted to \$4.3 million in 1963, a decrease of 2 percent from 1958. These figures exclude pumice and pumicite mining operations by Federal, State, and local governments; such operations are not included in the scope of the census.

During 1963, establishments in the Natural Abrasives, except Sand, Industry shipped products valued at \$4.9 million, an increase of 46 percent from 1958, according to preliminary results. Average employment in this industry showed an increase of 22 percent from 1958 to a total 279 employees in 1963. Value added in mining amounted to \$4.2 million in 1963, an increase of 57 percent from 1958.

Table 1A—GENERAL STATISTICS FOR THE PUMICE AND PUMICITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	85	70	77	¹ 17
With 20 employees or more.....	....do.....	1	2	1	(NA)
All employees:					
Number.....	Number.....	247	354	² 267	127
Payroll.....	Thousand dollars...	1,056	1,218	² 962	126
Production, development, and exploration workers:					
Number.....	Number.....	222	303	² 223	122
Man-hours.....	Thousand.....	428	471	² 440	197
Wages.....	Thousand dollars...	981	1,002	² 748	119
Value added in mining.....	....do.....	4,303	4,387	² 2,741	301
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	....do.....	1,334	1,408	² 769	³ 86
Contract work only.....	....do.....	264	159	² 276	-
Cost of purchased machinery installed.....	....do.....	369	312	298	(NA)
Value of shipments and receipts.....	....do.....	5,324	5,482	² 3,393	⁴ 387
Capital expenditures.....	....do.....	682	625	415	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	29	(NA)	.26	2

- Represents zero.

(NA) Not available.

¹Represents number of mines.

²Excludes data for 2 establishments in Hawaii.

³Excludes cost of minerals received for preparation.

⁴Represents net production and receipts.

January 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS, Richard M. Scammon, Director



The Pumice and Pumicite Industry represents establishments engaged primarily in mining, quarrying, milling, or otherwise preparing pumice and pumicite (volcanic ash).

The Natural Abrasives, except Sand, Industry represents establishments engaged primarily in mining, quarrying, milling, or otherwise preparing natural abrasives, such as corundum, industrial diamonds, emery, garnet, and tripoli. This industry includes the shaping of natural abrasive stones at the quarry. Establishments primarily engaged in the production of blast, grinding, or polishing sand are classified in Industry 1441, Sand and Gravel, and those primarily engaged in the production of diatomite in Industry 1499, Miscellaneous Nonmetallic Minerals, N.E.C.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The census of mineral industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in an industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments and receipts for products purchased and resold without further processing at the establishment. For the Pumice and Pumicite Industry, the total value of shipments and other receipts in 1963 was \$5.3 million, of which over 95 percent represented products primary to the industry. For the Natural Abrasives, except Sand, Industry, value of shipments and receipts amounted to \$4.9 million, with over 99 percent representing products primary to the industry.

The total value of shipments for an industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, for pumice and pumicite, over 95 percent of the production was produced in the Pumice and Pumicite Industry, and all natural abrasives, except sand, were produced in the Natural Abrasives, except Sand, Industry.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for these industries will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their

prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C. 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 1B.—GENERAL STATISTICS FOR THE NATURAL ABRASIVES, EXCEPT SAND, INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	22	20	22	¹ 36
With 20 employees or more.....	....do.....	4	4	3	(NA)
All employees:					
Number.....	Number.....	279	229	218	443
Payroll.....	Thousand dollars...	1,480	1,007	885	479
Production, development, and exploration workers:					
Number.....	Number.....	199	204	197	383
Man-hours.....	Thousand.....	423	408	403	798
Wages.....	Thousand dollars...	964	801	698	346
Value added in mining.....	....do.....	4,169	2,648	2,874	1,115
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	....do.....	1,187	786	869	² 220
Cost of purchased machinery installed.....	....do.....	73	88	79	(NA)
Value of shipments and receipts.....	....do.....	4,921	3,373	3,490	³ 1,335
Capital expenditures.....	....do.....	508	149	332	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	16	(NA)	(NA)	5

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents net production and receipts.

1963 CENSUS OF MINERAL INDUSTRIES

Table 2.—GENERAL STATISTICS FOR THE PUMICE AND PUMICITE AND THE NATURAL ABRASIVES, EXCEPT SAND, INDUSTRIES, BY REGIONS AND STATES: 1963 AND 1958

Industry, region, and State	1963											1958		
	Establish- ments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of pur- chased machin- ery in- stalled	Value of ship- ments and receipts	Capital ex- pendi- tures	All em- ploy- ees, number	Value added in mining
	Total	With 20 em- ploy- ees or more	Number	Payroll (\$1,000)	Number	Man- hours (1,000)	Wages (\$1,000)							
PUMICE AND PUMICITE (SIC 1495)														
United States.....	85	1	247	1,056	222	428	981	4,303	1,334	369	5,324	682	354	4,387
Mountain.....	35	-	105	458	96	179	435	1,981	621	230	2,541	291	114	1,995
New Mexico.....	11	-	37	203	35	65	197	704	293	88	875	210	60	813
Arizona.....	8	-	37	166	34	67	157	1,079	109	13	1,161	40	(NA)	(NA)
Pacific.....	45	1	125	566	114	226	516	2,231	683	135	2,677	372	196	2,089
Oregon.....	7	-	30	156	27	58	139	428	159	55	572	70	(NA)	(NA)
California.....	24	1	88	365	70	137	332	1,315	396	44	1,527	228	135	1,493
NATURAL ABRASIVES, EXCEPT SAND (SIC 1497)														
United States.....	22	4	279	1,480	199	423	964	4,169	1,187	73	4,921	508	229	2,648
Middle Atlantic and North Central.....	12	4	262	1,401	187	400	898	3,870	1,112	24	4,550	456	213	2,340

Represents zero. (NA) Not available.

Table 3.—PRIMARY PRODUCTS OF THE PUMICE AND PUMICITE AND NATURAL ABRASIVES, EXCEPT SAND, INDUSTRIES PRODUCED IN ALL INDUSTRIES, BY REGIONS AND STATES: 1963 AND 1958

Product, region and State	1963			1958		
	Total Production	Total shipments including interplant transfers		Total Production	Total shipments including interplant transfers	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
PUMICE AND PUMICITE ¹						
United States.....	2,333	2,344	5,361	2,093	2,073	5,486
Mountain.....	1,330	1,359	2,541	1,170	1,143	2,579
New Mexico.....	306	306	875	492	482	1,032
Arizona.....	718	741	1,161	417	400	1,039
Pacific.....	981	963	2,677	830	825	2,430
Oregon.....	362	362	572	(NA)	(NA)	(NA)
California.....	286	268	1,527	437	432	1,622
NATURAL ABRASIVES, EXCEPT SAND						
United States.....	79	80	4,920	66	65	3,510
Middle Atlantic and North Central.....	68	69	4,549	59	(NA)	(NA)

(NA) Not available.

¹For 1963, excludes Federal, State, and local government operations. These appear to have been significant for the first time for that Census year.²Represents value of shipments of establishments in the Pumice and Pumicite Industry.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14F-6

INDUSTRY SERIES

Talc, soapstone, and pyrophyllite

SIC Code 1496

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Talc, Soapstone, and Pyrophyllite Industry shipped products valued at \$17.4 million, an increase of 16 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed a decrease of 3 percent from 1958

to a total of 1,261 employees in 1963. Value added in mining amounted to \$13.7 million in 1963, an increase of 16 percent from 1958.

The Talc, Soapstone, and Pyrophyllite Industry represents establishments engaged primarily in mining, quarrying, milling, or otherwise preparing talc, soapstone, or pyrophyllite. Dimension soapstone is included in this industry. Establishments engaged in grinding or otherwise preparing talc, soapstone, or pyrophyllite which do not include a mine are classified in the manufacturing Industry 3295, Minerals and Earths, Ground or Otherwise Treated. About 25 percent of all prepared talc,

Table 1.--GENERAL STATISTICS FOR THE TALC, SOAPSTONE, AND PYROPHYLLITE INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	65	64	68	138
With 20 employees or more.....	...do.....	9	12	13	(NA)
All employees:					
Number.....	Number.....	1,261	1,294	1,471	1,137
Payroll.....	Thousand dollars...	6,524	5,320	4,940	1,189
Production, development, and exploration workers:					
Number.....	Number.....	1,042	1,123	1,297	970
Man-hours.....	Thousand.....	2,212	2,289	2,778	2,068
Wages.....	Thousand dollars...	5,313	4,157	4,141	807
Value added in mining.....	...do.....	13,673	11,755	9,486	2,441
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	4,411	3,542	3,044	² 828
Cost of purchased machinery installed.....	...do.....	481	509	486	(NA)
Value of shipments and receipts.....	...do.....	17,352	14,908	11,819	(NA)
Value of net shipments and receipts.....	...do.....	16,792	(D)	11,563	3,269
Capital expenditures.....	...do.....	1,213	898	1,197	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	49	(NA)	36	12

D Withheld to avoid disclosing figures for individual companies.

NA Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

February 1965

U. S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



soapstone, and pyrophyllite was prepared at such establishments in 1963.

This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based upon the definitions embodied in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of non-production workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value

measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Talc, Soapstone, and Pyrophyllite Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, the total value of shipments and other receipts in 1963 of establishments classified in the Talc, Soapstone, and Pyrophyllite Industry amounted to \$17.4 million and of this total, \$16.7 million represented products primary to the industry.

The total value of shipments for the industry (i.e., the total value of receipts of establishments classified in the industry) should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. They indicate that the total value of net shipments of crude and prepared talc, soapstone, and pyrophyllite shipped by all producers was \$20.3 million in 1963. For crude materials, over 99 percent of the tonnage mined was produced in the Talc, Soapstone, and Pyrophyllite Industry. But for prepared materials, with shipments valued at \$18.5 million, shipments by establishments classified in the Talc, Soapstone, and Pyrophyllite Industry were valued at \$14.4 million, while the remainder was shipped by establishments classified in other industries.

The total value of shipments for an industry contains some duplication introduced by the inclusion of minerals transferred from one establishment to another for mineral preparation. In general, where this duplication is significant, figures are shown both for "gross" and "net" shipments in table 1. The "net" shipments are obtained by subtracting the value of crude minerals transferred to other establishments, or, if not available, cost of minerals received for preparation from the "gross" shipments. Wherever value of shipments is shown without further specification, it represents gross shipments.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics

(tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment," and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during

the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the Census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

Table 2.—GENERAL STATISTICS FOR THE TALC, SOAPSTONE, AND PYROPHYLLITE INDUSTRY, BY REGIONS AND STATES: 1963 AND 1958

Region and State	1963										1958		
	Establishments, number	All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)		(\$1,000)
United States, total..	65	9	1,261	6,524	1,042	2,212	5,313	13,673	4,411	481	17,352	1,213	11,755
Northeast.....	8	4	438	2,953	360	832	2,593	6,300	2,018	183	7,992	509	5,738
South.....	19	5	649	2,357	557	1,136	2,044	4,934	1,184	144	5,940	322	4,607
North Carolina.....	6	3	172	717	142	290	547	1,472	348	6	1,804	22	1,778
West.....	38	-	174	1,214	125	244	676	2,439	1,209	154	3,420	382	1,410
California.....	25	-	131	1,028	85	162	498	1,928	995	144	2,787	280	1,153

- Represents zero.

Table 3.—PRIMARY PRODUCTS OF THE TALC, SOAPSTONE, AND PYROPHYLLITE INDUSTRY PRODUCED IN ALL INDUSTRIES IN THE UNITED STATES: 1963 AND 1958

Product, region, and State	1963			1958		
	Total production	Total shipments including interplant transfers		Total production	Total shipments including interplant transfers	
		Quantity (1,000 short tons)	Value (\$1,000)		Quantity (1,000 short tons)	Value (\$1,000)
United States:						
Crude:						
Mined and prepared at same establishment.....	599	(X)	(X)	490	(X)	(X)
Production and net shipments.....	866	1,217	1,845	726	1,237	1,574
Prepared (crushed, ground, or sawed, including flotation concentrates), total.....	(NA)	761	18,484	(NA)	600	17,593
Ore mined and processed at establishments classified in the mineral industries.....	563	567	14,658	453	456	12,908
Ore processed at establishments classified in the manufacturing industries.....	(NA)	194	3,826	(NA)	144	4,685
Northeast and North Central:						
Crude.....	380	18	124	286	-	-
Prepared.....	323	323	7,854	(NA)	274	7,936
South:						
Crude.....	278	185	1,445	258	75	386
Prepared.....	(NA)	257	6,268	(NA)	188	5,810
North Carolina:						
Crude.....	107	43	189	127	33	143
Prepared.....	63	63	1,615	89	90	2,023
West:						
Crude.....	208	124	1,376	182	162	1,188
Prepared.....	(NA)	181	4,362	(NA)	138	3,847
California:						
Crude.....	135	187	1,096	116	194	1,871
Prepared.....	(NA)	153	1,004	(NA)	110	2,974

- Represents zero. (NA) Not available. (X) Not applicable.

¹Represents gross shipments less receipts of material from other establishments for preparation.

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1963 CENSUS OF MINERAL INDUSTRIES

MIC63(P)-14F-7



INDUSTRY SERIES

Miscellaneous nonmetallic minerals

SIC Code 1499

preliminary
report

This report is one of a series presenting preliminary information on industries and products covered in the 1963 Census of Mineral Industries. The figures will be superseded in a final report which, in turn, will be included in Volume I, Summary and Industry Statistics, 1963 Census of Mineral Industries.

During 1963, establishments in the Miscellaneous Nonmetallic Minerals Industry shipped products valued at \$42.1 million, an increase of 33 percent over 1958, according to preliminary results obtained from the 1963 census. Average employment in this industry showed an increase of 1 percent from 1958 to a total of 1,817 employees in 1963.

Value added in mining amounted to \$31.7 million in 1963, an increase of 36 percent from 1958.

The Miscellaneous Nonmetallic Minerals, N.E.C., Industry represents establishments engaged primarily in mining, quarrying, milling, or otherwise preparing nonmetallic minerals, not elsewhere classified, such as asbestos, diatomite, natural gem stones, graphite, greensand, Iceland spar (optical grade calcite), and vermiculite. Separate sub-industry figures have been tabulated for 1963 and earlier years for "Asbestos," "Diatomite," "Perlite," and "Vermiculite and other minerals." These sub-industry figures are shown in tables 1B, 1C, 1D, and 1E.

Table 1A.—GENERAL STATISTICS FOR THE MISCELLANEOUS NONMETALLIC MINERALS INDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	74	55	70	¹ 37
With 20 employees or more.....	...do.....	18	17	14	(NA)
All employees:					
Number.....	Number.....	1,817	1,791	1,768	734
Payroll.....	Thousand dollars...	11,019	8,610	7,320	845
Production, development, and exploration workers:					
Number.....	Number.....	1,513	1,344	1,374	630
Man-hours.....	Thousand.....	3,182	3,018	2,703	1,395
Wages.....	Thousand dollars...	8,742	5,950	5,258	636
Value added in mining.....	...do.....	31,664	23,368	17,437	2,153
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work....	...do.....	12,378	9,562	7,939	² 888
Contract work only.....	...do.....	2,450	1,144	1,336	8
Cost of purchased machinery installed.....	...do.....	3,474	2,869	1,441	(NA)
Value of shipments and receipts.....	...do.....	42,095	31,611	24,860	³ 041
Capital expenditures.....	...do.....	5,421	4,188	1,957	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	108	(NA)	76	13

(NA) Not available.

¹Represents number of mines.

²Excludes cost of minerals received for preparation.

³Represents value of net production and receipts.

March 1965

U.S. DEPARTMENT OF COMMERCE, John T. Connor, Secretary

BUREAU OF THE CENSUS



This report includes figures for administrative offices, storage facilities, and other auxiliary units which service mining establishments. The classification of establishments for which data are tabulated in this report is based on the definitions in the 1957 edition of the Standard Industrial Classification (SIC) Manual, as amended to date.

ESTABLISHMENTS

The Census of Mineral Industries is conducted by obtaining a separate report for each establishment in the United States with one or more employees or with value of shipments or capital expenditures amounting to \$500 or more. Of about 37,000 mining establishments included in the 1963 minerals census, approximately three-fourths are operated by single-establishment companies which file a single report. Firms operating more than one establishment were required to submit a separate report for each location. Companies engaged in distinctly different lines of activity at one location were asked to submit separate reports if the company records permitted such a separation, and if the separate activities were substantial in size.

EMPLOYEES

The method of compiling figures for employees has varied somewhat from period to period. For 1963 and 1958, figures on all employees represent the average number of production, development, and exploration workers for the payroll periods ended nearest the 15th of March, May, August, and November, plus the number of all other employees for the payroll period ended nearest the 15th of March. For 1954, the all employee figure is an average of 12 monthly figures. For 1939, all employees represents the average number of production, development, and exploration workers based on 12 monthly figures, plus the number of nonproduction workers for one payroll period in October. The figures for production, development, and exploration workers, 1963 and 1958, are based on employment for the payroll period ended nearest the 15th of March, May, August, and November. For 1954 and 1939, the figure represents the average of 12 monthly figures.

VALUE ADDED IN MINING

Value added is derived as value of shipments and receipts plus capital expenditures less the cost of supplies, minerals received for preparation, purchased fuels and electric energy, contract work, and purchased machinery. Value added avoids the duplication in the value of shipments which results from the use of products of one establishment as supplies, energy sources, or materials by another. Moreover, it provides a measure not only of value added in mineral production but also in the development of mineral properties. For these reasons, it is, for most purposes, the best value measure for comparing the relative economic importance of mining activities among industries and geographic areas. No adjustments have been made in the money figures shown in this report for changes in price levels from 1958 to 1963.

VALUE OF SHIPMENTS

The value of shipments reported by establishments classified in the Miscellaneous Nonmetallic

Minerals Industry consists not only of products described above as primary to the industry, but also of the value of secondary products (which are primary in other industries), receipts for contract work performed for other establishments, and receipts for products purchased and resold without further processing at the establishment. However, for the Miscellaneous Nonmetallic Minerals Industry, the total value of shipments and other receipts in 1963 was \$42.1 million, of which over 99 percent represented products primary to the industry.

The total value of shipments for an industry, which is the total value of receipts of establishments classified in the industry, should be clearly distinguished from the total value of primary products of the industry shipped by all producers. The latter figures appear in table 3. However, in 1963, shipments of primary products of the Miscellaneous Nonmetallic Minerals Industry amounted to less than one percent of the total reported shipments of such products.

GENERAL STATISTICS

The general statistics (employment, payrolls, cost of supplies, value of shipments, etc.) in tables 1 and 2 are reported for each establishment as a whole. Aggregates of such figures for an industry reflect not only the primary activities of the establishments in that industry, but also their activities in the production of secondary products and receipts for contract work which they performed for others. This fact should be taken into account in comparing industry statistics (tables 1 and 2) with product statistics (table 3) which show the shipments by all producers of the primary products of the industry.

PUBLICATION PROGRAM AND BACKGROUND

More detailed figures for this industry will appear in the final census reports. These reports will also include a comprehensive discussion of such concepts as "industry," "establishments," and "secondary production," as well as the various statistical items such as "employment" and "value added." Similar preliminary and final reports will be issued for other industries during the coming months. A series of preliminary summary reports showing U.S. totals for each mining industry and for each State is being issued. Final industry, area, and summary reports will be published during the second half of 1965 through mid-1966. Order forms showing these reports and their prices may be obtained from any U.S. Department of Commerce field office or from the Bureau of the Census, Washington, D.C., 20233.

The 1963 Census of Mineral Industries is the 15th census of mining establishments in the United States. The first minerals census covered the year 1840. For 1963, the census was conducted jointly with censuses of manufactures, retail trade, wholesale trade, and selected services, under authority of Title 13 of the United States Code. This law requires that a census of mineral industries be conducted every 5 years and, as recently amended, to cover years ending in "2" and "7." Thus, the next census will be conducted in 1968 covering mining activity in 1967.

1963 CENSUS OF MINERAL INDUSTRIES

3

Table 1B.—GENERAL STATISTICS FOR THE ASBESTOS SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	11	14	17	¹ 9
With 20 employees or more.....	...do.....	4	4	(NA)	(NA)
All employees:					
Number.....	Number.....	457	478	435	169
Payroll.....	Thousand dollars...	2,560	1,608	1,402	169
Production, development, and exploration workers:					
Number.....	Number.....	395	423	394	160
Man-hours.....	Thousand.....	807	801	754	344
Wages.....	Thousand dollars...	2,141	1,287	1,164	151
Value added in mining.....	...do.....	4,477	3,774	3,899	341
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	2,566	1,450	1,093	² 151
Cost of purchased machinery installed.....	...do.....	1,591	182	248	(NA)
Value of shipments and receipts.....	...do.....	5,521	5,061	4,877	³ 492
Capital expenditures.....	...do.....	3,113	345	363	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	22	(NA)	17	4

(NA) Not available.

¹Represents number of mines.²Excludes cost of minerals received for preparation.³Represents value of net production and receipts.

Table 1C.—GENERAL STATISTICS FOR THE DIATOMITE SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	16	13	14	¹ 14
With 20 employees or more.....	...do.....	8	7	(NA)	(NA)
All employees:					
Number.....	Number.....	846	857	864	361
Payroll.....	Thousand dollars...	5,865	4,803	3,880	476
Production, development, and exploration workers:					
Number.....	Number.....	681	619	635	299
Man-hours.....	Thousand.....	1,494	1,497	1,206	751
Wages.....	Thousand dollars...	4,665	3,303	2,718	338
Value added in mining.....	...do.....	21,829	14,723	9,233	1,393
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	6,392	6,598	5,590	² 625
Cost of purchased machinery installed.....	...do.....	1,194	2,019	1,036	(NA)
Value of shipments and receipts.....	...do.....	27,906	20,212	14,784	³ 2,018
Capital expenditures.....	...do.....	1,509	3,128	1,075	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	45	(NA)	38	7

(NA) Not available.

¹Represents number of mines.²Excludes cost of minerals received for preparation.³Represents value of net production and receipts.

1963 CENSUS OF MINERAL INDUSTRIES

Table 1D.—GENERAL STATISTICS FOR THE PERLITE SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954
Establishments:				
Total.....	Number.....	22	14	19
With 20 employees or more.....	...do.....	3	3	(NA)
All employees:				
Number.....	Number.....	218	176	123
Payroll.....	Thousand dollars...	1,054	922	486
Production, development, and exploration workers:				
Number.....	Number.....	180	120	101
Man-hours.....	Thousand.....	364	320	241
Wages.....	Thousand dollars...	705	563	369
Value added in mining.....	...do.....	1,678	1,772	1,621
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	1,790	795	665
Cost of purchased machinery installed.....	...do.....	193	542	69
Value of shipments and receipts.....	...do.....	3,490	2,604	2,259
Capital expenditures.....	...do.....	171	505	96
Horsepower rating of power equipment.....	Thousand horsepower	12	(NA)	8

(NA) Not available.

Table 1E.—GENERAL STATISTICS FOR THE VERMICULITE AND OTHER MINERALS SUBINDUSTRY IN THE UNITED STATES FOR SELECTED YEARS

Item	Unit of measure	1963	1958	1954	1939
Establishments:					
Total.....	Number.....	25	14	20	¹ 14
With 20 employees or more.....	...do.....	3	3	(NA)	(NA)
All employees:					
Number.....	Number.....	296	280	346	204
Payroll.....	Thousand dollars...	1,540	1,277	1,552	200
Production, development, and exploration workers:					
Number.....	Number.....	257	182	244	171
Man-hours.....	Thousand.....	517	400	502	300
Wages.....	Thousand dollars...	1,231	797	1,007	147
Value added in mining.....	...do.....	3,680	3,099	2,684	419
Cost of supplies, minerals received for preparation, purchased fuel and electric energy, and contract work.....	...do.....	1,530	719	591	² 112
Cost of purchased machinery installed.....	...do.....	495	126	88	(NA)
Value of shipments and receipts.....	...do.....	5,178	3,734	2,940	³ 531
Capital expenditures.....	...do.....	628	210	423	(NA)
Horsepower rating of power equipment.....	Thousand horsepower	29	(NA)	14	2

(NA) Not available.

¹Represents number of mines.²Excludes cost of minerals received for preparation.³Represents value of net production and receipts.

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Table 2.—GENERAL STATISTICS FOR THE MISCELLANEOUS NONMETALLIC MINERALS INDUSTRY, BY GEOGRAPHIC AREAS: 1963 AND 1958

Geographic area	1963												1958	
	Establishments, number		All employees		Production, development, and exploration workers			Value added in mining	Cost of supplies, minerals received for preparation, purchased energy, and contract work	Cost of purchased machinery installed	Value of shipments and receipts	Capital expenditures	All employees, number	Value added in mining
	Total	With 20 employees or more	Number	Payroll	Number	Man-hours	Wages							
				(\$1,000)		(1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)	(\$1,000)			(\$1,000)
United States, total.....	74	18	1,817	11,019	1,513	3,182	8,742	31,664	12,378	3,474	42,095	5,421	1,791	23,368
Northeast and North Central.....	6	2	261	1,274	216	433	986	3,887	1,194	71	4,760	392	(NA)	(NA)
South Atlantic and East South Central	5	1	74	237	63	99	171	1,198	206	157	1,475	86	(NA)	(NA)
West South Central Texas.....	7	2	110	499	93	183	333	646	986	138	1,619	151	(NA)	(NA)
Mountain.....	32	8	517	2,921	465	1,056	2,505	6,440	3,039	830	8,993	1,316	599	5,317
New Mexico.....	4	1	46	242	37	70	167	978	237	64	1,228	51	101	1,350
Nevada.....	10	3	139	1,030	131	337	937	3,312	1,197	402	4,206	705	135	1,513
Pacific.....	24	5	855	6,088	676	1,411	4,747	19,493	6,953	2,278	25,248	3,476	769	13,593

(NA) Not available.

Table 3.—PRIMARY PRODUCTS OF THE MISCELLANEOUS NONMETALLIC MINERALS INDUSTRY: 1963 AND 1958

Product	1963			1958		
	Total production	Total shipments including interplant transfers		Total production	Total shipments including interplant transfers	
		Quantity	Value		Quantity	Value
	(1,000 short tons)	(1,000 short tons)	(\$1,000)	(1,000 short tons)	(1,000 short tons)	(\$1,000)
Asbestos, crude and prepared.....	68	63	5,490	44	144	14,900
Diatomite, prepared.....	491	490	27,559	458	452	20,114
Perlite ²	407	351	3,500	364	283	2,604
Other nonmetallic minerals ³	250	245	14,521	206	211	3,731

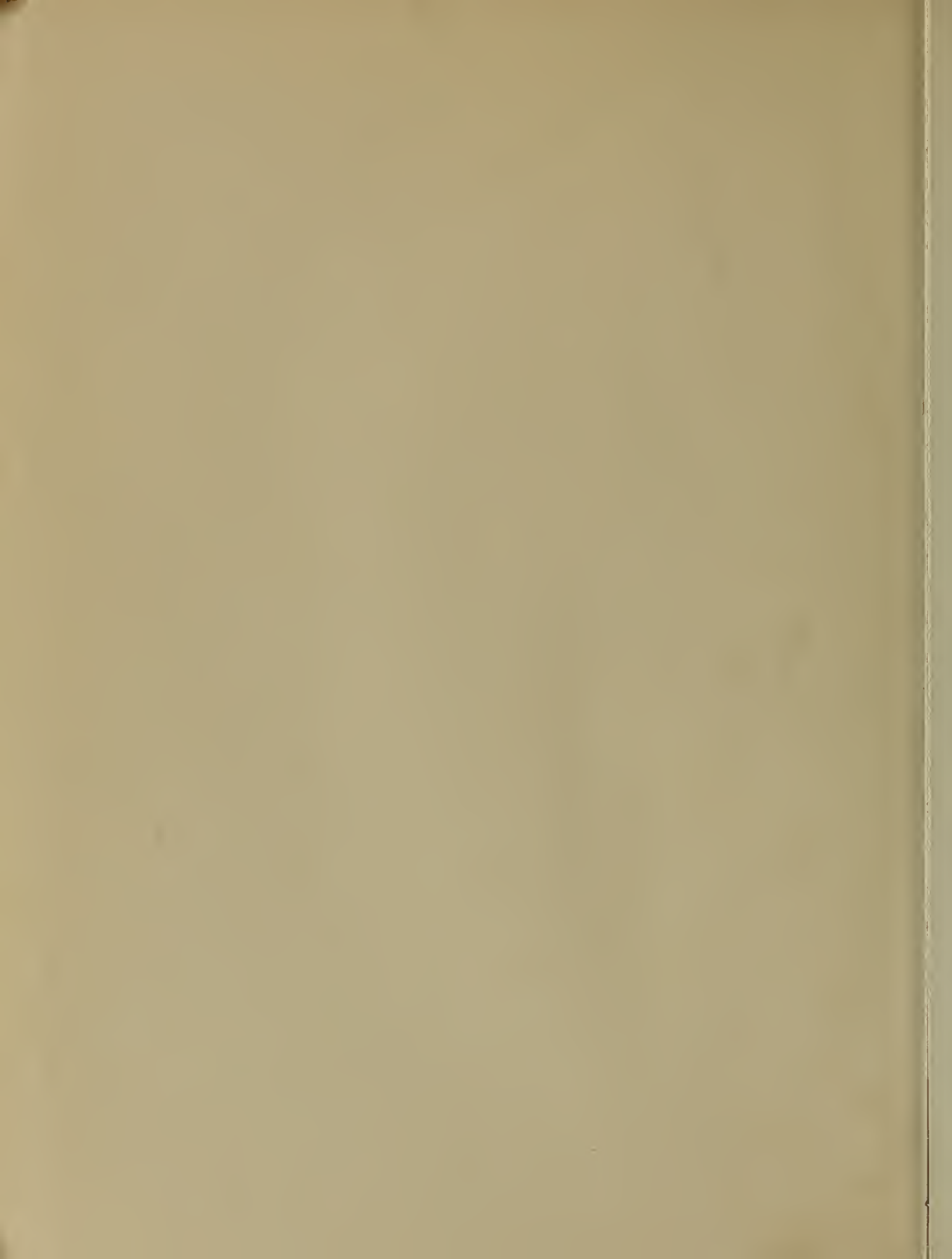
¹Represents net shipments, that is, gross shipments less minerals received from other establishments for preparation.²Represents crude production and crude and prepared shipments. Includes simple preparation methods such as drying and crushing, and expansion if performed in conjunction with mining.³Represents such minerals as vermiculite, graphite, gemstones, staurolite, and greensand.

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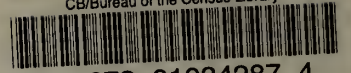
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